

HELLO!

THIS FILE IS A COLLECTION OF INDIVIDUAL SHEETS
COVERING A BUNCH OF LESSONS ON MUSIC THEORY.

IT'S NOT A *BOOK*... YET. IT MIGHT BE SOMEDAY!
BUT AS OF RIGHT NOW, IT'S INCOMPLETE.

THE TRUTH IS, THEY WEREN'T INTENDED TO
BE A **SINGLE VOLUME** WHEN I STARTED MAKING THEM...
THEY WERE JUST **REVIEW SHEETS** FOR MY OWN
THEORY STUDENTS.

BUT THE MORE I MADE,
THE MORE I REALIZED
THEY COULD BE COLLECTED
INTO A **TEXTBOOK OF SORTS...**
EVENTUALLY!

I STILL HAVE A **LOT OF WORK TO DO**,
BUT I'VE COLLECTED THE ONES I'VE MADE
SO FAR INTO A **SINGLE DOCUMENT** TO
MAKE IT EASIER FOR THE FOLKS
WHO WANTED THEM ALL... BUT DIDN'T WANT
TO DOWNLOAD EVERY FILE INDIVIDUALLY!

SO UNDERSTAND IT'S A **WORK IN PROGRESS**... THE PROGRESS IS SLOW
SOMETIMES, BECAUSE I TEACH **MUSIC THEORY**
AND **AURAL SKILLS** DURING THE DAY AT THE
UNIVERSITY OF DAYTON IN DAYTON, OHIO,
AND THEN HEAD HOME TO SPEND TIME WITH
MY **WIFE AND SIX KIDS!**

SO IF YOU'VE BEEN SENT THIS FILE
BY SOMEONE, KNOW THAT THERE
MIGHT BE A **NEWER VERSION** -
OR **MORE PAGES** -
AT **TOBYRUSH.COM**.

BUT IF YOU LIKE THIS,
OR FIND IT USEFUL,
GREAT! FEEL FREE TO
SHARE IT, COPY IT, AND USE IT.

JUST DON'T SELL IT, CHANGE IT,
OR TELL OTHERS YOU **MADE IT!***



NOW LET'S
LEARN SOME
MUSIC THEORY!



What is Music Theory?



CHANCES ARE THERE'S A PIECE OF MUSIC THAT MOVES YOU IN A **PROFOUND WAY...**

A WAY THAT IS **FRUSTRATINGLY DIFFICULT** TO **DESCRIBE** TO SOMEONE ELSE!

LIKE OTHER FORMS OF ART, MUSIC OFTEN HAS THE CAPABILITY TO CREATE EMOTIONAL REACTIONS IN THE LISTENER THAT TRANSCENDS OTHER FORMS OF COMMUNICATION.

THOUGH A **SINGLE PIECE OF MUSIC** MAY ELICIT **DIFFERENT REACTIONS** FROM **DIFFERENT LISTENERS**, ANY LOVER OF MUSIC WILL TELL YOU THAT THOSE FEELINGS ARE **REAL!**

AND IF THEY'RE **REAL**, THEY'RE WORTHY OF **STUDY**.



ONE OF THE **MOST VALUABLE PARTS** OF **MUSIC THEORY** IS GIVING NAMES TO MUSICAL STRUCTURES AND PROCESSES, WHICH MAKES THEM **EASIER** TO TALK ABOUT!

leading tone (lē'ding tōn), *n.* [music] 1. That one note where it's all, like, NNGGG and you just want it to be like AHH yeah and when they don't, you're like UGH man you need to play the

COMING UP WITH TERMINOLOGY DOESN'T JUST HELP US TALK TO OTHERS ABOUT MUSIC, THOUGH... IT ACTUALLY **HELPS US LEARN!**

BUT WHILE IT'S AN IMPORTANT STEP, AND A GREAT PLACE TO START, MUSIC THEORY IS MUCH MORE THAN JUST COMING UP WITH NAMES FOR THINGS!

WHEN COMPOSERS WRITE MUSIC - WHETHER IT'S A CLASSICAL-ERA SYMPHONY OR A BIT OF JAPANESE POST-SHIBUYA-KEI GLITCH TECHNO - THEY ARE NOT FOLLOWING A PARTICULAR SET OF RULES. IF ANYTHING THEY ARE OFTEN TRYING TO **BREAK THEM!**

SO WHILE A LOT OF PEOPLE THINK MUSIC THEORY IS ABOUT LEARNING THE **RULES** FOR HOW TO WRITE MUSIC, THAT'S NOT QUITE RIGHT. MUSIC THEORISTS DON'T **CREATE RULES** FOR WRITING MUSIC; THEY LOOK FOR **PATTERNS** IN MUSIC THAT IS **ALREADY WRITTEN**.



COMPOSERS CREATE...



...THEORISTS ANALYZE!



WHICH LEADS TO THE **MOST IMPORTANT QUESTION**... THE ONE THAT, AS YOU STUDY MUSIC THEORY, YOU SHOULD BE CONSTANTLY ASKING YOURSELF:

WHY?

BECAUSE SOMEWHERE IN THERE IS THE REASON WHY THAT PIECE OF MUSIC MOVES YOU.

MAYBE IT'S IN THE NOTES. MAYBE IT'S IN THE SILENCE. MAYBE IT'S **SOMEWHERE IN BETWEEN**.

THE REASON IT MAKES YOU CRY, GIVES YOU CHILLS, REMINDS YOU OF HOME.

IT MAY TAKE A LONG TIME, OR EVEN CREATE MORE QUESTIONS THAN ANSWERS.

BUT MUSIC THEORISTS ARE GOING TO **FIND IT**, BECAUSE...

WHY DISSECT MUSIC? WHAT'S THE POINT OF FIGURING OUT **RULES** THAT **COMPOSERS THEMSELVES** WEREN'T EVEN WORRIED ABOUT?

MUSIC THEORY IS FIGURING OUT WHAT MAKES MUSIC WORK.

AND YOU JUST JOINED THE TEAM. GRAB YOUR STUFF... LET'S GO!

Notation: Pitch

MUSIC NOTATION IS THE ART OF RECORDING MUSIC IN WRITTEN FORM.

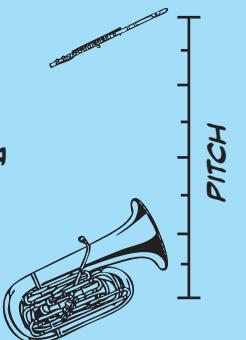


MODERN MUSIC NOTATION IS A PRODUCT OF **CENTURIES** OF TRANSFORMATION... AND IT IS NEITHER **EFFICIENT** NOR **INTUITIVE**!

PITCH IS THE HIGHNESS OR LOWNESS OF A SOUND.

FOR EXAMPLE, A FLUTE HAS A HIGH PITCH, WHILE A TUBA HAS A LOW PITCH.

A NOTE IS A WRITTEN REPRESENTATION OF A PARTICULAR PITCH.



NOTATION IS BASED ON THE PIANO KEYBOARD; LINES AND SPACES ON THE STAFF REPRESENT THE WHITE NOTES ON THE KEYBOARD.

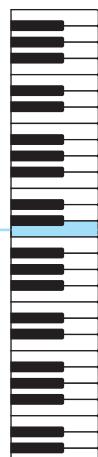
TO DISPLAY NOTES OUTSIDE THE STAFF, WE USE SHORTENED STAFF LINES CALLED LEDGER LINES.



TREBLE CLEF



ALTO CLEF



THE CLEF DETERMINES WHAT NOTES EACH STAFF LINE CORRESPONDS TO. THE FOUR MODERN CLEFS ARE SHOWN HERE; THE NOTE DISPLAYED ON EACH STAFF CORRESPONDS TO MIDDLE C.

TO NOTATE THE BLACK NOTES ON THE PIANO KEYBOARD, WE USE ACCIDENTALS, WHICH ALTER THE NOTE BY ONE OR TWO HALF STEPS.

A HALF STEP IS THE DISTANCE BETWEEN TWO ADJACENT KEYS ON THE PIANO KEYBOARD, REGARDLESS OF WHAT COLOR THE KEYS ARE.

 THE DOUBLE SHARP RAISES THE NOTE BY TWO HALF STEPS.

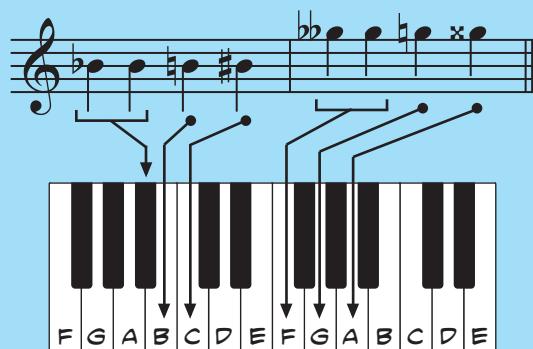
 THE SHARP RAISES THE NOTE BY ONE HALF STEP.

 THE NATURAL CANCELS OUT ANY PREVIOUS ACCIDENTAL.

 THE FLAT LOWERS THE NOTE BY ONE HALF STEP.

 THE DOUBLE FLAT LOWERS THE NOTE BY TWO HALF STEPS.

THESE SYMBOLS ARE PLACED TO THE LEFT OF THE NOTE THAT THEY AFFECT, AND THEY APPLY TO ALL THE NOTES ON THAT LINE OR SPACE FOR THE REST OF THE MEASURE.



TWO NOTES WHICH HAVE THE SAME PITCH (FOR EXAMPLE, F SHARP AND G FLAT) ARE CALLED ENHARMONICS.

Notation: Rhythm



WHILE PITCH IS PRETTY CLEARLY NOTATED ON A VERTICAL AXIS, NOTE LENGTH IS INDICATED USING A SOMEWHAT ARCANE SYSTEM INVOLVING NOTEHEADS, STEMS AND FLAGS.

DOUBLE WHOLE NOTE



WHOLE NOTE



HALF NOTE



QUARTER NOTE



EIGHTH NOTE



SIXTEENTH NOTE



THIRTY-SECOND NOTE



SIXTY-FOURTH NOTE



ONE-HUNDRED-TWENTY-EIGHTH NOTE



IN THIS CHART, EACH SUCCESSIVE TYPE OF NOTE IS **HALF AS LONG** AS THE NOTE TO ITS LEFT. NONE OF THESE NOTES HAS A **STANDARD LENGTH**; A HALF NOTE IN ONE PIECE MAY BE THE SAME LENGTH AS AN EIGHTH NOTE IN A DIFFERENT PIECE.

NOTE LENGTHS IN A PIECE ARE INDICATED BY THE **TEMPO MARKING** AT THE BEGINNING OF A PIECE OR SECTION.

DOUBLE WHOLE REST



WHOLE REST



HALF REST



QUARTER REST



EIGHTH REST



SIXTEENTH REST



THIRTY-SECOND REST



SIXTY-FOURTH REST



ONE-HUNDRED-TWENTY-EIGHTH REST



A REST IS A PERIOD OF SILENCE THE LENGTH OF WHICH CORRESPONDS TO A PARTICULAR NOTE.



USUALLY RESTS ARE PLACED ON THE STAFF AT A PARTICULAR VERTICAL POSITION AS SHOWN HERE.

THE **AUGMENTATION DOT** IS A DOT PLACED TO THE RIGHT OF A NOTEHEAD. THOUGH SMALL, THIS DOT WIELDS SOME **SERIOUS POWER**: IT ADDS HALF OF THE ORIGINAL NOTE'S LENGTH!

MULTIPLE DOTS CAN ALSO BE ADDED, EACH ONE ADDING HALF OF THE PREVIOUSLY ADDED VALUE.



TIES ARE CURVED MARKS WHICH CONNECT TWO NOTES TOGETHER TO CREATE A **SINGLE, EXTENDED SOUND**.



TO TIE MORE THAN TWO NOTES TOGETHER, DRAW TIES BETWEEN EACH NOTE; DO NOT USE A SINGLE, EXTENDED TIE.

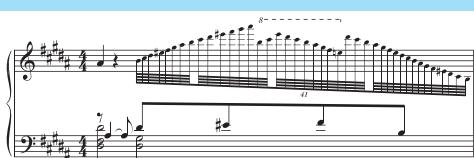


A **TUPLET** IS ANY NON-STANDARD DIVISION OF A NOTE. THESE ARE USUALLY WRITTEN AS A GROUP OF NOTES DELINEATED WITH A **BRACKET** AND A **NUMBER** SHOWING THE DIVISION BEING MADE.

MOST TUPLETS ARE SIMPLE DIVISIONS, LIKE THE **TRIPLETS** TO THE LEFT. BUT ANYTHING IS POSSIBLE! CHOPIN, FOR EXAMPLE, WOULD OFTEN **GO TO TOWN** WITH THESE THINGS.



FOR EXAMPLE, THESE AREN'T EXACTLY QUARTER NOTES; THEY ARE EACH A THIRD AS LONG AS A HALF NOTE.



WH... GAH!
CHOPIN, NO!
DOWN, BOY!

Notation: Meter

A FUNDAMENTAL FEATURE OF MOST PIECES OF MUSIC IS A **CONSISTENT RHYTHMIC PULSE**.

THIS PULSE IS CALLED THE **BEAT**, AND A SINGLE PULSE IS CALLED A **BEAT UNIT**.

THERE ARE TWO TYPES OF BEAT UNITS: THOSE CONTAINING TWO DIVISIONS, CALLED **SIMPLE BEAT UNITS**...



...AND THOSE CONTAINING THREE DIVISIONS, CALLED **COMPOUND BEAT UNITS**.

IN MUSIC, BEATS ARE ORGANIZED INTO PATTERNS OF ACCENTED AND UNACCENTED BEAT UNITS. IN FACT, IF YOU LISTEN TO A SEQUENCE OF REPEATED NOTES, YOUR BRAIN WILL PROBABLY START TO PERCEIVE THE NOTES AS GROUPS OF TWO, THREE, OR FOUR, EVEN IF NO ACCENTS ARE PRESENT!



THESE GROUPS ARE CALLED **MEASURES**, AND THEY ARE DELINEATED WITH **BARLINES**.



MEASURE

THE ORGANIZATION OF BEAT UNITS AND MEASURES IN A PIECE IS CALLED **METER**. METER IS DESCRIBED BY TWO NUMBERS PLACED AT THE BEGINNING OF THE PIECE: THE **TIME SIGNATURE**.

SIMPLE TIME SIGNATURES ARE EASY.

**3
4**

THE TOP NUMBER INDICATES THE NUMBER OF BEATS IN A MEASURE.

THE BOTTOM NUMBER INDICATES THE TYPE OF NOTE WHICH SERVES AS THE BEAT UNIT.



THE CODE FOR THE BOTTOM NOTE IS PRETTY EASY: 4 REFERS TO A QUARTER NOTE, 8 TO AN EIGHTH NOTE, 16 TO A SIXTEENTH NOTE, AND SO ON.

COMPOUND TIME SIGNATURES ARE KIND OF LYING TO YOU.

**6
8**

THE TOP NUMBER INDICATES THE NUMBER OF DIVISIONS IN A MEASURE. TO GET THE NUMBER OF BEATS, DIVIDE IT BY THREE.

THE BOTTOM NUMBER INDICATES THE TYPE OF NOTE WHICH SERVES AS THE DIVISION. TO GET THE BEAT UNIT, USE THE NOTE THAT IS EQUAL TO THREE OF THESE NOTES. IN A COMPOUND METER, THE BEAT UNIT IS ALWAYS A DOTTED NOTE!

**2.
•**



IN FACT, WOULDN'T THIS BE AN EASIER WAY TO NOTATE COMPOUND METERS?

SORRY... THE MAN SAYS YOU HAVE TO DO IT THE OTHER WAY.

BY LOOKING AT THE TOP NUMBER OF THE TIME SIGNATURE, YOU CAN TELL TWO THINGS ABOUT THE METER: WHETHER IT'S SIMPLE OR COMPOUND, AND HOW MANY BEATS ARE IN A MEASURE.

	SIMPLE	COMPOUND
2	2	6
3	3	9
4	4	12

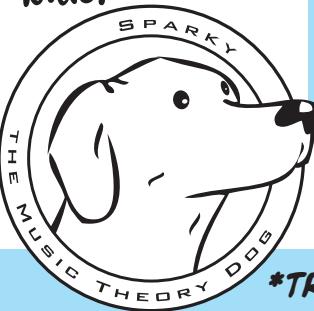
NOTES THAT HAVE FLAGS CAN BE GROUPED TOGETHER BY USING BEAMS IN PLACE OF FLAGS.



HOWEVER, BEAMING IS ONLY USED TO GROUP NOTES WITHIN BEATS. FOR THE MOST PART, YOU SHOULDN'T BEAM NOTES BETWEEN BEATS, NOR SHOULD YOU TIE NOTES WITHIN BEATS.



hey, it's kids! SPARKY THE MUSIC THEORY DOG!



Q: Dear Sparky:

I understand that we're supposed to beam rhythms to show the organization of beats in the measure, but is there an easy way to beam complex rhythms?

--A.Y., Owatonna, MN

A: **WOOF!***

***TRANSLATION:** NOTES SHOULD BE BEAMED IN GROUPS THAT ILLUSTRATE THE METER. FOR SIMPLE RHYTHMS, THIS IS PRETTY EASY TO DO; SIMPLY GROUP ANY NOTES THAT CAN BE BEAMED (EIGHTH NOTES AND SMALLER) INTO GROUPS THAT ARE EQUAL TO THE BEAT UNIT OF THE CURRENT METER.



FOR COMPLEX RHYTHMS, HOWEVER, THINGS CAN GET COMPLICATED... WHEN A RHYTHM INCLUDES THINGS LIKE SYNCOPATIONS OR OTHER OFF-BEAT FIGURES, ILLUSTRATING THE METER MAY INVOLVE DIVIDING NOTES ACROSS BEAT UNITS WITH TIES. FORTUNATELY, THERE IS A STEP-BY-STEP SYSTEM FOR CORRECTLY BEAMING THESE COMPLICATED RHYTHMS!

FOR EXAMPLE, LET'S TAKE THIS RHYTHM, WHICH IS WRITTEN WITHOUT BEAMING.

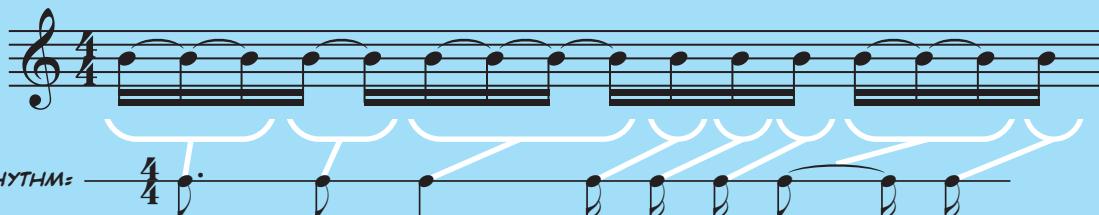


STEP 1: FIND THE SMALLEST NOTE VALUE USED, AND FILL A COMPLETE MEASURE WITH THIS TYPE OF NOTE, BEAMED IN GROUPS THAT ARE EQUAL TO A BEAT UNIT IN THE CURRENT METER.



STEP 2: ADD TIES BETWEEN INDIVIDUAL NOTES TO RECREATE THE ORIGINAL RHYTHM. MAKE SURE THAT EACH TIED GROUP CORRESPONDS TO A NOTE IN THE RHYTHM YOU STARTED WITH!

YES, I KNOW IT LOOKS WEIRD... BUT WE'RE NOT DONE YET!



STEP 3: FIND EVERY GROUP OF TWO OR MORE NOTES THAT ARE BOTH TIED TOGETHER AND BEAMED TOGETHER, AND REPLACE THEM WITH A SINGLE NOTE OF EQUIVALENT VALUE.

IF YOU HAVE NOTES THAT ARE TIED OR BEAMED, BUT NOT BOTH, THEN LEAVE THEM ALONE!



A CORRECTLY BEAMED RHYTHM MAY INCLUDE TIES, BUT IT WILL VERY CLEARLY SHOW THE BEATS IN THE MEASURE... WHICH, IN TURN, MAKES IT EASIER FOR THE PERFORMER TO READ!

DOING STUFF THE SPARKY WAY IS ALWAYS FUN!

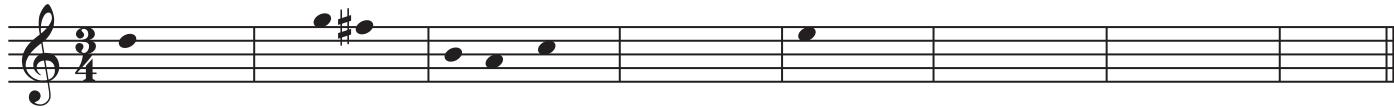
The Major Scale

ONE OF THE REASONS THAT A PARTICULAR PIECE OF MUSIC **SOUNDS THE WAY IT DOES** HAS TO DO WITH THE **GROUP OF NOTES** THE COMPOSER DECIDED TO USE.



TAKE THIS MELODY, FOR EXAMPLE...

LET'S FIRST REMOVE ALL THE DUPLICATE NOTES, REGARDLESS OF WHICH OCTAVE THEY'RE IN.



NEXT, LET'S PUT THE NOTES IN **ALPHABETICAL ORDER**, STARTING ON THE NOTE THAT THE MELODY SOUNDED LIKE IT WAS **CENTERING** ON.



WHAT WE END UP WITH
IS THE "PALETTE" FOR
THIS PARTICULAR PIECE...

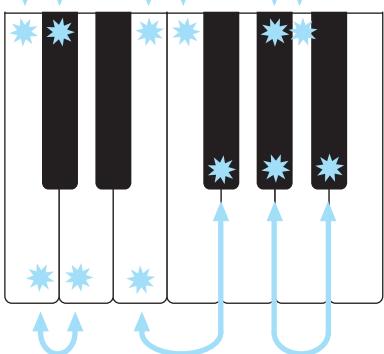


THERE ARE ACTUALLY MANY DIFFERENT **TYPES** OF SCALES, EACH WITH A DIFFERENT PATTERN OF **WHOLE STEPS** AND **HALF STEPS**.

LIKE THE BOARD ON WHICH A PAINTER HOLDS THE BITS OF PAINT BEING USED IN THE PAINTING BEING CREATED.

IN MUSIC, THIS "PALETTE" IS CALLED
A **SCALE**. THOUGH WE USUALLY WRITE
SCALES FROM **LOW TO HIGH**, THE ORDER IS ACTUALLY
UNIMPORTANT; IT'S THE **NOTES** CONTAINED IN THE
SCALE THAT HELP MAKE A PIECE SOUND
THE WAY IT DOES.

THIS PARTICULAR ARRANGEMENT, WHERE HALF STEPS OCCUR BETWEEN STEPS THREE AND FOUR AND BETWEEN STEPS SEVEN AND EIGHT (OR BETWEEN SEVEN AND ONE, SINCE EIGHT AND ONE ARE THE SAME NOTE), IS CALLED THE MAJOR SCALE.



A WHOLE STEP IS THE EQUIVALENT OF TWO HALF STEPS.



(THIS SCALE, BY THE WAY, IS CALLED THE **G MAJOR SCALE**, BECAUSE IT STARTS ON G.)

KNOWING THIS FORMULA, YOU CAN CREATE A MAJOR SCALE ON ANY NOTE!



**BUT REMEMBER...
WITH
GREAT POWER
COMES GREAT
RESPONSIBILITY!**

Key Signatures

IF YOU START WRITING MAJOR SCALES AND PAY ATTENTION TO THE ACCIDENTALS THAT OCCUR, YOU ARE GOING TO START NOTICING A PATTERN...

FOR EXAMPLE LOOK AT THE FLAT KEYS, STARTING WITH THE KEY THAT HAS **ONE FLAT**, ALL THE WAY THROUGH THE KEY WITH **SEVEN FLATS**: THE FLATS ACCRUE IN A SPECIFIC ORDER. SAME WITH THE SHARP KEYS!

SO IF YOU LOOK FOR A KEY THAT HAS ONLY A **D FLAT**, YOU WON'T FIND IT: IF A KEY HAS A **D FLAT**, IT MUST ALSO HAVE A **B FLAT**, AN **E FLAT** AND AN **A FLAT**!

SINCE WRITING AN ENTIRE PIECE IN **C SHARP MAJOR** WOULD HAVE BEEN A SURE-FIRE WAY TO GET **CARPAL TUNNEL SYNDROME** WITH ALL THE SHARPS INVOLVED, COMPOSERS PRETTY QUICKLY CAME UP WITH A WAY TO SIMPLIFY THINGS: **KEY SIGNATURES**.

A **KEY SIGNATURE** IS A GROUP OF ACCIDENTALS PLACED AT THE BEGINNING OF EVERY LINE OF MUSIC, JUST TO THE RIGHT OF THE CLEF, THAT INSTRUCTS THE PERFORMER TO APPLY THOSE ACCIDENTALS TO **EVERY CORRESPONDING NOTE** IN THE PIECE UNLESS SPECIFIED OTHERWISE.

FOR EXAMPLE, THIS KEY SIGNATURE INDICATES THAT EVERY **F**, **C**, AND **G** IN THE PIECE SHOULD BE SHARPED, REGARDLESS OF OCTAVE!

OH, AND ANOTHER THING: THE ACCIDENTALS HAVE TO BE PLACED IN THE **CORRECT ORDER**, AND THEY NEED TO FOLLOW A **PARTICULAR PATTERN** OF PLACEMENT THAT **VARIABLES** SLIGHTLY DEPENDING ON THE **CLEF** BEING USED! IF YOU DEVIATE FROM THIS, YOU, AS A COMPOSER, WILL BE MOCKED!

TENOR CLEF SHARPS! WHAT'S YOUR PROBLEM? YOU NEED TO CONFORM!

AB A B-flat C-flat D-flat E-flat F G

A B C-sharp D-sharp E-sharp F-sharp G-sharp

B-flat C-sharp D-sharp E-sharp F-sharp G-sharp

C-flat D-sharp E-sharp F-sharp G-sharp

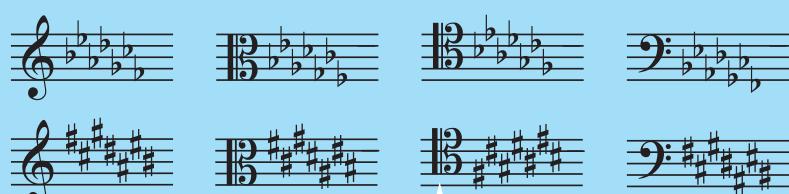
D-flat E-sharp F-sharp G-sharp

E-flat F-sharp G-sharp

F G-sharp



HA HA... NEVER!

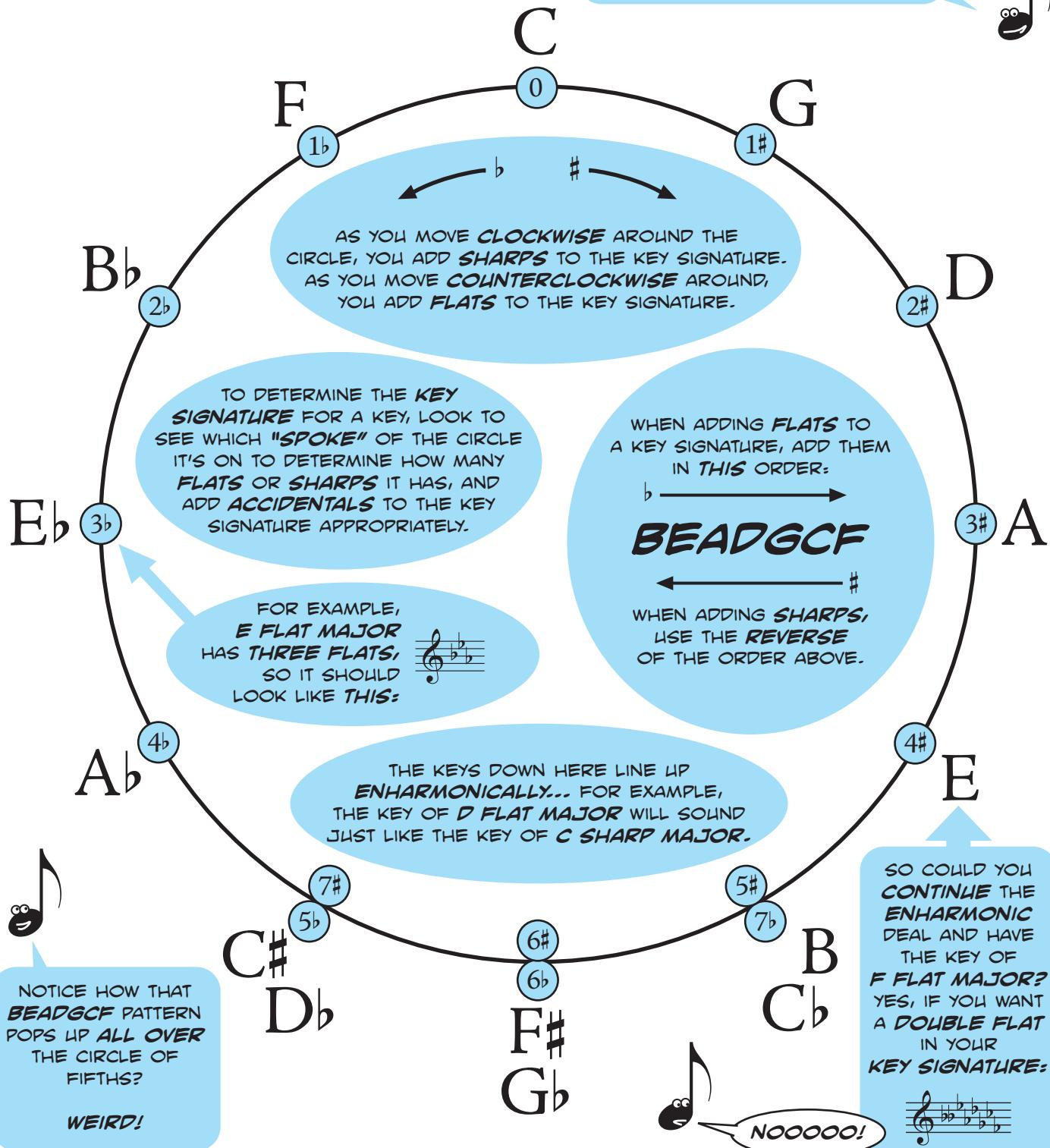


The Circle of Fifths

THIS CHART, CALLED THE CIRCLE OF FIFTHS, DISPLAYS EACH KEY AS A SPOKE ON THE CIRCLE, BEGINNING WITH C MAJOR AT THE TOP AND ADDING ACCIDENTALS, ONE AT A TIME, TO THE KEY SIGNATURES AROUND THE PERIMETER.

THEORISTS FIND IT CONVENIENT TO ORGANIZE ALL THE POSSIBLE KEY SIGNATURES INTO A CHART THAT SHOWS THEIR RELATIONSHIP TO ONE ANOTHER.

WE'LL RETURN TO THIS CHART AS WE CONTINUE LEARNING ABOUT HOW COMPOSERS USE KEYS.



Diatonic Intervals

THE MOST BASIC WAY WHICH WE IDENTIFY DIFFERENT INTERVALS IS BY COUNTING THE STEPS BETWEEN THE TWO NOTES.

AN INTERVAL IS THE DISTANCE IN PITCH BETWEEN TWO NOTES.



SMALLER INTERVALS

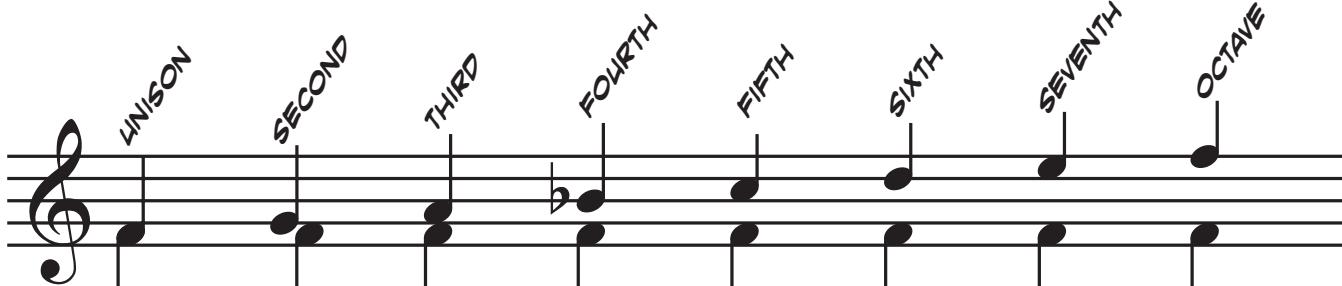
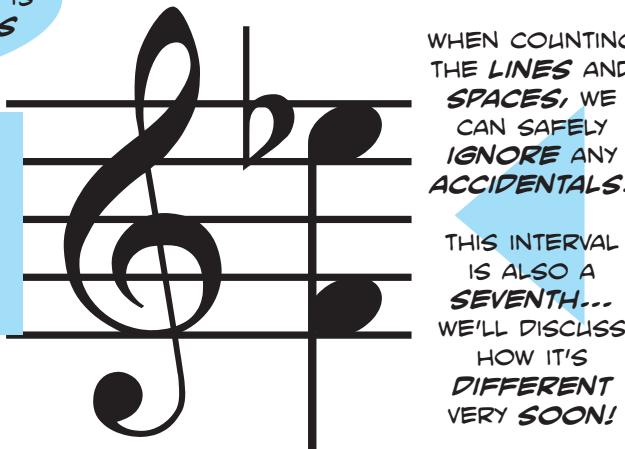
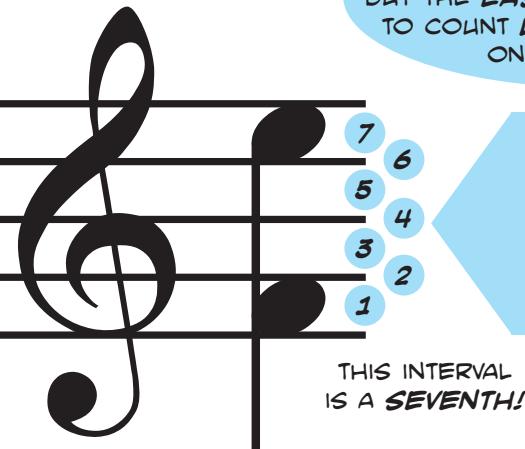


SPECIFICALLY, WE COUNT SCALE DEGREES, BUT THE EASIEST WAY TO DO IT IS TO COUNT LINES AND SPACES ON THE STAFF.

WHEN COUNTING, BEGIN WITH THE BOTTOM NOTE AS ONE AND COUNT UNTIL YOU REACH THE TOP NOTE.

WHEN COUNTING THE LINES AND SPACES, WE CAN SAFELY IGNORE ANY ACCIDENTALS.

THIS INTERVAL IS ALSO A SEVENTH... WE'LL DISCUSS HOW IT'S DIFFERENT VERY SOON!

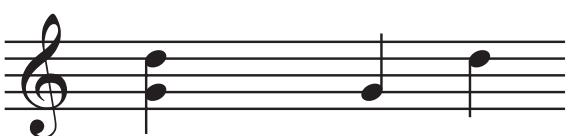


TWO NOTES ON THE SAME LINE OR SPACE IS CALLED A UNISON.

THAT'S LATIN FOR "ONE SOUND"!

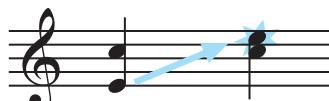
THE DISTANCE FROM A NOTE TO THE NEXT CLOSEST NOTE WITH THE SAME LETTER NAME IS CALLED AN OCTAVE.

WHEN WE ARE TALKING ABOUT INTERVALS WE SOMETIMES DISCUSS HARMONIC INTERVALS AND MELODIC INTERVALS.



A HARMONIC INTERVAL IS SIMPLY TWO NOTES PLAYED SIMULTANEOUSLY; A MELODIC INTERVAL IS ONE NOTE PLAYED AFTER THE OTHER.

AND WHEN YOU SWAP THE TWO NOTES (MOVE THE LOWER NOTE UP BY AN OCTAVE SO IT BECOMES THE HIGHER NOTE), THAT IS CALLED INVERTING THE INTERVAL.



IT'S HELPFUL TO REMEMBER THAT SECONDS ALWAYS INVERT TO SEVENTHS, THIRDS TO SIXTHS, AND SO FORTH...

THE FACT THAT EACH OF THESE PAIRS ADD UP TO NINE IS KNOWN TO THEORISTS AS "THE RULE OF NINES."

THE RULE

2ND	→	7TH
3RD	→	6TH
4TH	→	5TH
5TH	→	4TH
6TH	→	3RD
7TH	→	2ND

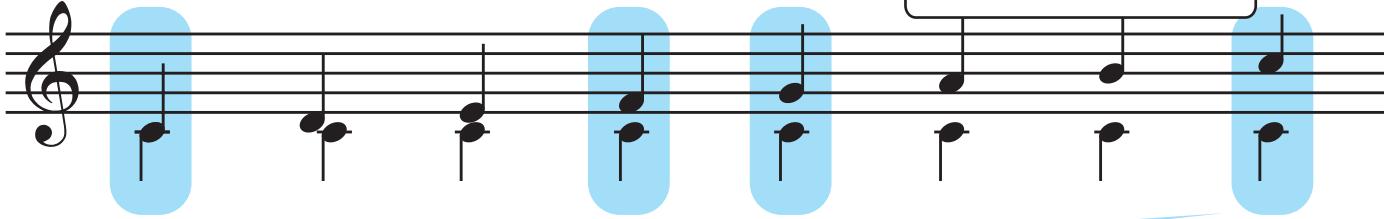
OF NINES

Perfect Intervals

THE DISTANCE OF AN INTERVAL IS ONE PART OF ITS NAME, BUT THERE'S MORE: EVERY INTERVAL HAS ANOTHER QUALITY TO IT, WHICH WE'LL CALL INFLECTION.

INFLECTION IS A BIT HARDER TO UNDERSTAND, PARTLY BECAUSE IT DEPENDS ON THE TYPE OF INTERVAL. SO LET'S START BY LOOKING AT UNISONS, FOURTHS, FIFTHS AND OCTAVES.

SOME THEORISTS USE THE TERM **QUALITY** FOR THIS... THAT'S COOL TOO.



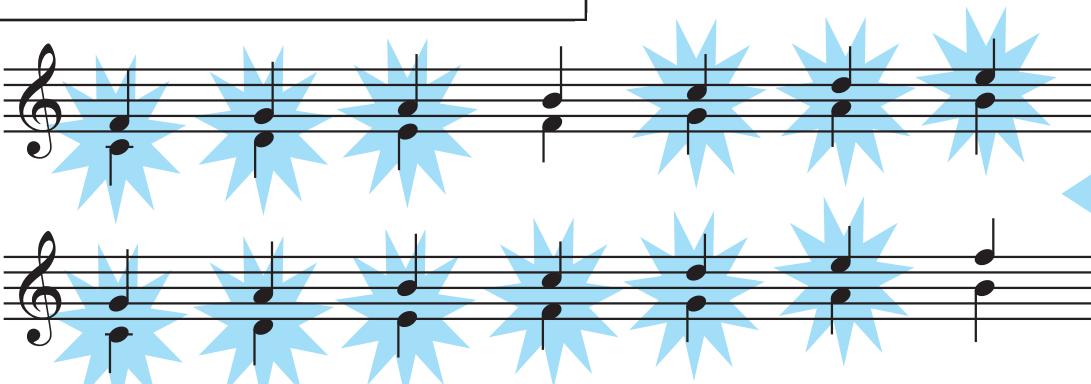
UNISONS AND OCTAVES

ARE THE EASIEST TO LABEL: IF THE TWO NOTES ARE THE **SAME** (FOR EXAMPLE, **B FLAT** AND **B FLAT**), THEN THE INFLECTION IS **PERFECT**: SUCH AN INTERVAL IS CALLED A **PERFECT UNISON** OR A **PERFECT OCTAVE**.

FOURTHS AND FIFTHS

REQUIRE A LITTLE MORE EXPLAINING.

IF YOU LOOK AT ALL THE FOURTHS AND FIFTHS YOU CAN CREATE USING ONLY THE **WHITE NOTES** ON THE PIANO KEYBOARD (IN OTHER WORDS, USING ONLY NOTES **WITHOUT ACCIDENTALS**):



EACH ONE IS **PERFECT** EXCEPT FOR THOSE WHICH USE **F** AND **B**!



WAIT...
WHY ARE THE
B TO **F** INTERVALS
DIFFERENT?

WELL, IF YOU WERE TO COUNT THE **HALF-STEP**S THAT MAKE UP EACH INTERVAL, YOU'D NOTICE THAT ALL THE OTHER ONES ARE **EQUAL IN SIZE**, BUT THE **B** TO **F** INTERVALS ARE NOT: **F** TO **B** IS A **HALF-STEP LARGER** THAN A **PERFECT FOURTH**, AND **B** TO **F** IS A **HALF-STEP SMALLER** THAN A **PERFECT FIFTH**.

WHICH RAISES THE **QUESTION**: IF THE INTERVAL IS NOT **PERFECT**, THEN WHAT **IS** IT?

AN INTERVAL THAT IS A **HALF-STEP LARGER** THAN **PERFECT** IS CALLED AN **AUGMENTED INTERVAL**.



YOU CAN GO **FURTHER**,
TO **DOUBLY AUGMENTED** AND
DOUBLY DIMINISHED INTERVALS,
BUT... DO YOU REALLY WANT TO?



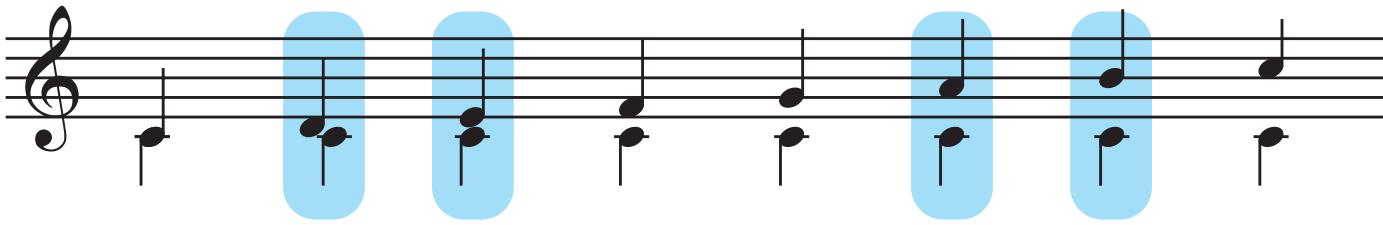
AND THERE'S
**NO SUCH THING AS A
DIMINISHED UNISON...**

JUST LIKE TWO THINGS
CAN'T BE **NEGATIVE TWO FEET**
AWAY FROM EACH OTHER!

AN INTERVAL THAT IS A **HALF-STEP SMALLER** THAN **PERFECT** IS CALLED A **DIMINISHED INTERVAL**.

Imperfect Intervals

WE'VE TALKED ABOUT UNISONS, FOURTHS, FIFTHS AND OCTAVES, BUT WHAT ABOUT THE REST? ARE THESE OTHER INTERVALS SOMEHOW *IMPERFECT*?



WELL, YES, BUT NOT BECAUSE THEY ARE SOMEHOW *INFERIOR* TO PERFECT INTERVALS... **SECONDS, THIRDS, SIXTHS AND SEVENTHS** JUST WORK A LITTLE *DIFFERENTLY*!

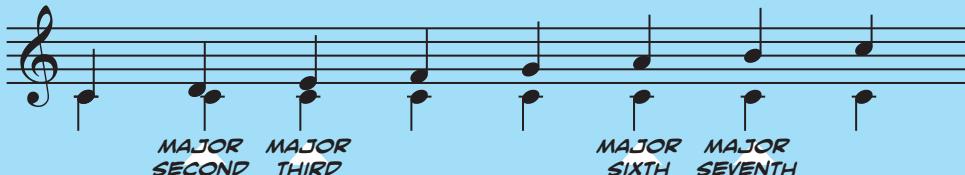
A
AUGMENTED

FOR ONE THING, THE **INFLECTION** FOR THESE INTERVALS IS NEVER **PERFECT**; IT WILL BE EITHER **MAJOR** OR **MINOR**. MINOR INTERVALS ARE A HALF-STEP SMALLER THAN MAJOR INTERVALS. LIKE PERFECT INTERVALS, THOUGH, THEY CAN ALSO BE **AUGMENTED** OR **DIMINISHED**; AUGMENTED INTERVALS ARE A HALF-STEP LARGER THAN MAJOR, AND DIMINISHED INTERVALS ARE A HALF-STEP SMALLER THAN MINOR.

M
MAJOR

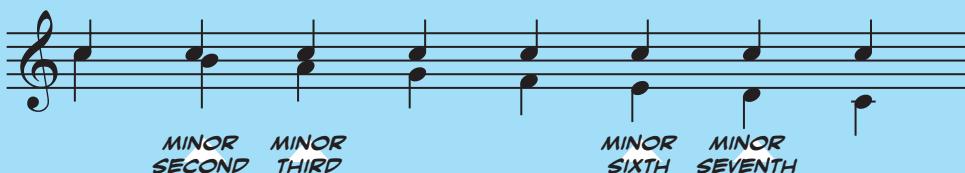
HOW DO WE KNOW IF AN INTERVAL IS **MAJOR** OR **MINOR**? WE CAN ACTUALLY USE THE **MAJOR SCALE** TO FIND OUT. NOTICE THAT, IN THE MAJOR SCALE, INTERVALS FROM THE **TONIC** UP TO ANOTHER SCALE DEGREE ARE **MAJOR**.

m
MINOR



d
DIMINISHED

LIKEWISE, INTERVALS FROM THE **TONIC** DOWN TO ANOTHER SCALE DEGREE ARE **MINOR**.



KNOWING THIS, WHEN YOU ARE CONFRONTED WITH A **SECOND, THIRD, SIXTH OR SEVENTH**, YOU CAN FIND ITS INFLECTION BY THINKING ABOUT THE KEY SIGNATURE OF THE TOP AND/OR BOTTOM NOTE.

WE KNOW THIS IS A **MAJOR SIXTH** BECAUSE **D**, THE TOP NOTE, IS IN THE KEY OF **F MAJOR** (THE BOTTOM NOTE).



AND THIS IS A **MINOR SEVENTH** BECAUSE **B**, BOTTOM NOTE, IS IN THE KEY OF **A MAJOR** (THE TOP NOTE).



** IF THE **TOP NOTE** IS IN THE MAJOR KEY OF THE **BOTTOM NOTE**, THE INTERVAL IS **MAJOR**. IF THE **BOTTOM NOTE** IS IN THE MAJOR KEY OF THE **TOP NOTE**, THE INTERVAL IS **MINOR**. **

WHEN THE NOTES OF THE INTERVAL HAVE **ACCIDENTALS**, THE ASSOCIATED KEY SIGNATURES CAN BE MORE **COMPLICATED**... SO IT'S EASIEST TO TEMPORARILY IGNORE THE ACCIDENTALS, DETERMINE THE INTERVAL, AND THEN **ADD THE ACCIDENTALS BACK ONE AT A TIME** AND **TRACK HOW THE INTERVAL CHANGES**!



ACK! WHAT IS THAT? LET'S FIRST HIDE THE ACCIDENTALS...



E IS IN THE KEY OF G, SO WE KNOW THIS IS A **MAJOR SIXTH**.



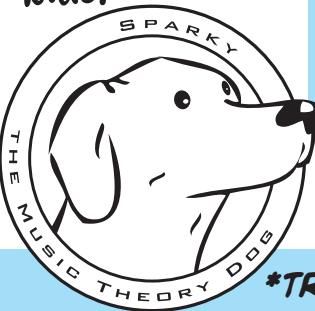
ADDING BACK THE **FLAT** MAKES THE INTERVAL **SMALLER**, SO IT'S NOW A **MINOR SIXTH**...



ADDING BACK THE **SHARP** MAKES IT EVEN **SMALLER**... A **DIMINISHED SIXTH**!

hey, it's
kids!

SPARKY THE MUSIC THEORY DOG!



Q: Dear Sparky:

Since we are supposed to use different approaches for identifying perfect and imperfect intervals, can you summarize them all into one system?

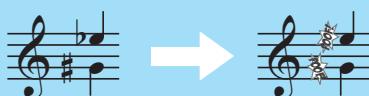
--I.M., Staten Island, NY

A: **WOOF!***

***TRANSLATION:** THE FOLLOWING CHART SHOWS AN APPROACH FOR IDENTIFYING ANY INTERVAL. A SIMILAR APPROACH CAN BE USED WHEN YOU NEED TO WRITE A PARTICULAR INTERVAL ABOVE OR BELOW A GIVEN NOTE: FIRST, ADD A NOTE ABOVE OR BELOW THE GIVEN NOTE AT THE CORRECT DISTANCE, THEN FOLLOW STEPS 2 THROUGH 4 OF THIS CHART TO IDENTIFY IT. THEN, IF NECESSARY, ALTER THE NOTE YOU ADDED WITH AN ACCIDENTAL TO CREATE THE INTERVAL CALLED FOR.

STEP 1:DETERMINE THE *DISTANCE* OF THE INTERVAL BY COUNTING *LINES* AND *SPACES*.COUNT THE *BOTTOM NOTE* AS ONE, AND CONTINUE UNTIL YOU REACH THE *TOP NOTE*.**STEP 2:**

COVER UP ALL ACCIDENTALS.

**STEP 3:**DETERMINE THE *INFLECTION* OF THE INTERVAL IN FRONT OF YOU (THE ONE WITHOUT ACCIDENTALS!) AS FOLLOWS:

IF IT IS A UNISON OR OCTAVE:

THE INTERVAL SHOWN IS A **PERFECT UNISON** OR **PERFECT OCTAVE**.REALLY.
IT JUST IS.

IF IT IS A FOURTH OR FIFTH:

IF THE INTERVAL USES THE NOTES **F** AND **B**, IT IS EITHER AN **AUGMENTED FOURTH** OR A **DIMINISHED FIFTH**.OTHERWISE, THE INTERVAL IS **PERFECT**.

IF IT IS A SECOND, THIRD, SIXTH OR SEVENTH:

IF THE **TOP NOTE** IS IN THE MAJOR KEY OF THE **BOTTOM NOTE**, THE INTERVAL IS **MAJOR**.IF THE **BOTTOM NOTE** IS IN THE MAJOR KEY OF THE **TOP NOTE**, THE INTERVAL IS **MINOR**.**STEP 4:**ADD THE *ORIGINAL ACCIDENTALS* BACK, ONE AT A TIME, AND TRACK HOW THE INTERVAL CHANGES INFLECTION.

M6

m6

d6

REMEMBER: ACCIDENTALS CAN NEVER AFFECT THE *DISTANCE* OF AN INTERVAL... ALL THEY CAN EVER DO IS CHANGE THE *INFLECTION*!

THIS METHOD MAY SEEM COMPLICATED AT FIRST, BUT IT BECOMES **EASIER** AND **FASTER** WITH **PRACTICE**... AND IT GIVES YOU THE **CORRECT ANSWER** EVERY TIME!

DOING STUFF THE SPARKY WAY IS ALWAYS FUN!

The Minor Scales

THERE ARE ACTUALLY TWO THINGS THAT DEFINE A KEY: THE KEY SIGNATURE IS THE MOST OBVIOUS ONE, BUT ANOTHER IMPORTANT PART OF A KEY IS THE TONIC... THE NOTE AROUND WHICH THE KEY CENTERS.

THIS KEY IS DEFINED BY A KEY SIGNATURE OF NO SHARPS AND FLATS, BUT ALSO BY THE FACT THAT IT CENTERS AROUND C.



BUT WHAT IF WE CHANGE THE TONIC? WHAT IF WE USE THE SAME NOTES FOR THE KEY SIGNATURE, BUT CHANGE THE NOTE THAT THE KEY IS CENTERED AROUND?

IF WE CENTER THE KEY AROUND THE SIXTH SCALE DEGREE OF THE MAJOR SCALE, WE GET A NEW SCALE: THE MINOR SCALE.

THE NATURAL MINOR SCALE

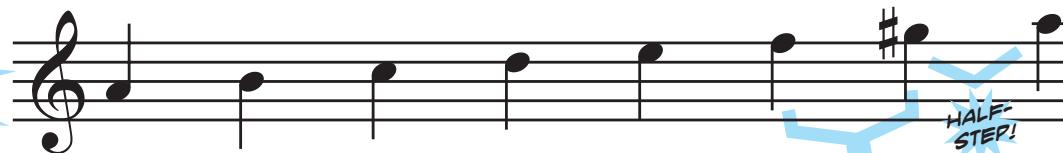


THE THING IS, COMMON PRACTICE PERIOD COMPOSERS WEREN'T ALL THAT CRAZY ABOUT THIS SCALE, BECAUSE IT LACKS SOMETHING THE MAJOR SCALE HAS: A HALF-STEP FROM SEVEN TO ONE.

THE WHOLE STEP HERE DIDN'T HAVE THE TENSION THEY LIKED GOING INTO THE TONIC!

THE HARMONIC MINOR SCALE

SO HERE'S WHAT THEY DID: THEY RAISED THE LEADING-TONE BY A HALF-STEP WITH AN ACCIDENTAL. THIS GAVE THEM THE TENSION THEY WERE LOOKING FOR!

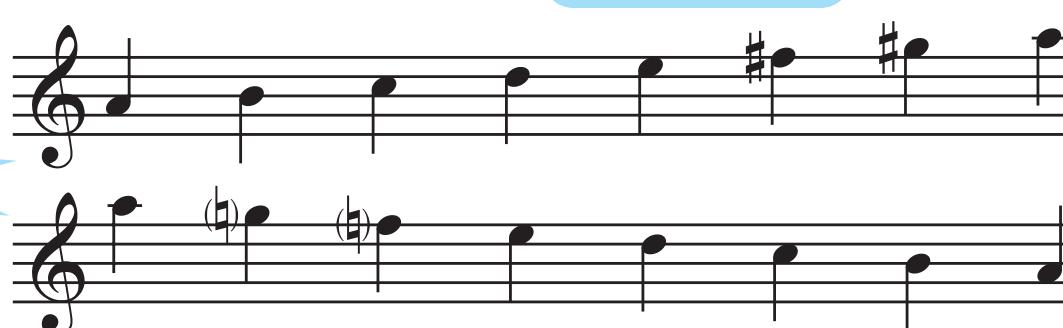


THIS SCALE IS GREAT FOR BUILDING CHORDS, SO WE REFER TO IT AS THE HARMONIC MINOR SCALE. HOWEVER, COMPOSERS DIDN'T USE IT FOR WRITING MELODIES, BECAUSE IT HAD A PROBLEM: AN AUGMENTED SECOND BETWEEN THE SIXTH AND SEVENTH SCALE DEGREES.

SO, FOR MELODIES, THEY MADE ANOTHER CHANGE: THEY ADDED ANOTHER ACCIDENTAL TO RAISE THE SIXTH SCALE DEGREE BY A HALF-STEP.

NOW WE ONLY HAVE WHOLE STEPS AND HALF-STEPS!

THE MELODIC MINOR SCALE



NOW, REMEMBER... THE REASON WE RAISED THE LEADING TONE IN THE FIRST PLACE WAS TO CREATE TENSION FROM THE SEVENTH SCALE DEGREE TO TONIC. BUT IN A MELODY, IF THE SEVENTH SCALE DEGREE IS FOLLOWED BY THE SIXTH SCALE DEGREE, WE DON'T NEED THAT TENSION, SO WE DON'T NEED TO RAISE THE LEADING-TONE AT ALL.

THE WAY WE ILLUSTRATE THIS IS BY DIFFERENTIATING BETWEEN ASCENDING MELODIC MINOR AND DESCENDING MELODIC MINOR; FOR DESCENDING MELODIC MINOR, WE DON'T RAISE ANYTHING!

Complex Meter

SIMPLE METERS AND COMPOUND METERS ARE BOTH USED QUITE A BIT IN THE COMMON PRACTICE PERIOD, BUT THEY WERE RARELY FOUND **TOGETHER...** MOST PIECES EXCLUSIVELY USED **ONE OR THE OTHER!**

COMPOUND METER,
COMPOUND METER,
WHEREFORE ART THOU
COMPOUND?

ON THE RARE OCCASION THAT THEY WERE COMBINED, IT WAS GENERALLY AS **MIXED METER**, WHEN THE METER CHANGES FROM ONE MEASURE TO THE NEXT.

UH, BECAUSE
OF THIS **DOT**...?



CONSISTENT ALTERNATIONS LIKE THIS ARE OFTEN WRITTEN WITH TWO TIME SIGNATURES AT THE BEGINNING, LIKE THIS: **6 3** **8 4**

BUT TWENTIETH-CENTURY COMPOSERS - ESPECIALLY THOSE WHO WERE WORKING IN A STYLE CALLED PRIMITIVISM, WHICH FEATURED PRIMAL, UNPREDICTABLE RHYTHMS - WOULD TAKE THE COMBINATION OF SIMPLE AND COMPOUND RHYTHMS TO THE NEXT LEVEL!

SIMPLE METER

BEAT UNIT
DIVISIBLE BY
TWO

BEAT SHOWN BY
UNDOTTED NOTE

COMPLEX METER

INCLUDES SIMPLE
AND COMPOUND BEATS



SIMPLE BEAT!

COMPOUND BEAT!

COMPOUND METER

BEAT UNIT
DIVISIBLE BY
THREE

BEAT SHOWN BY
DOTTED NOTE

IN THESE METERS, THE BEATS WILL BE **UNEVEN!** THE NOTE THAT SERVES AS THE **DIVISION** OF THE BEAT REMAINS **CONSTANT** THROUGHOUT THE MEASURE.

SO THESE **EIGHTH** NOTES SHOULD ALL BE THE **SAME LENGTH!**

LIKE **COMPOUND METERS**, THE **TIME SIGNATURE** FOR COMPLEX METERS IS BASED ON THE **DIVISION** OF THE BEAT. BUT, IN FACT, THESE METERS STILL HAVE **TWO, THREE OR FOUR BEATS** PER MEASURE!

5

CAN BE
WRITTEN AS



7

CAN BE
WRITTEN AS



8

CAN BE
WRITTEN AS



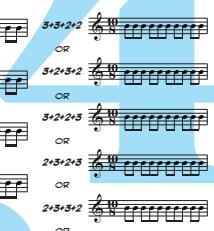
9

CAN BE
WRITTEN AS



10

CAN BE
WRITTEN AS



11

CAN BE
WRITTEN AS



OF COURSE, WHILE USING **8** FOR THE BOTTOM NUMBER IS MOST COMMON IN MODERN SCORES, ANY NOTE CAN BE USED AS THE DIVISION!

LIKE
7
16...

OR **11**
2!

Dynamics and Articulations

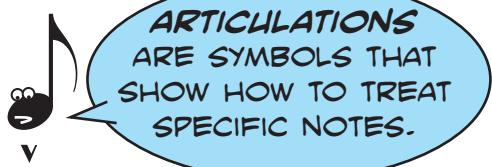
MUSIC IS MADE UP OF
A LOT MORE THAN PITCH
AND RHYTHM!



DYNAMICS ARE SYMBOLS THAT SHOW HOW LOUD TO PLAY OR SING.

<i>fff</i>	<i>ff</i>	<i>f</i>	<i>mf</i>	<i>mp</i>	<i>p</i>	<i>pp</i>	<i>ppp</i>	<i>n</i>
FORTISSISSIMO VERY VERY LOUD	FORTISSIMO VERY LOUD	FORTE LOUD	MEZZO FORTE MEDIUM LOUD	MEZZO PIANO MEDIUM SOFT	PIANO SOFT	PIANISSIMO VERY SOFT	PIANISSISSIMO VERY VERY SOFT	NIENTE INAUDIBLE
NOTATED MUSIC USES ITALIAN TERMS TO SHOW RELATIVE VOLUME.								
SPECIFIC INTERPRETATION IS LEFT TO THE PERFORMER!								
<i>cresc.</i>	GRADUAL DYNAMIC CHANGES ARE INDICATED WITH HAIRPIN SYMBOLS OR THE ITALIAN TERMS CRESCEndo (INCREASE VOLUME) OR DIminuendo (DECREASE VOLUME).						<i>dim.</i>	

DYNAMICS ARE USUALLY PLACED **BELow THE STAFF** ON INSTRUMENTAL PARTS, AND **ABOVE THE STAFF** FOR VOCAL PARTS... TO STAY OUT OF THE WAY OF THE LYRICS!



OTHER SYMBOLS AFFECT GROUPS OF NOTES...

8va —————

ALL' OTTAVA: PLAY THE NOTES AN OCTAVE HIGHER OR LOWER, DEPENDING ON WHERE THE SYMBOL IS. (TWO OCTAVES IS *15ma*, AND THREE OCTAVES IS *22ma*!)

—————

PEDALING: ON THE PIANO, THIS SYMBOL INDICATES WHEN THE DAMPER PEDAL SHOULD BE HELD DOWN, ALLOWING THE PIANO STRINGS TO RING FREELY. OLDER SCORES USE FOR DOWN AND FOR UP.



AND THEN THERE'S THIS THING...



A SIMPLE SHAPE WITH A BUNCH OF DIFFERENT USES!

IN MOST MUSIC IT'S A SLUR, GROUPING NOTES WHICH SHOULD BE PLAYED SMOOTHLY AND CONNECTED!

FOR BOWED STRINGS LIKE VIOLIN, IT'S A BOW MARKING, SHOWING NOTES THAT SHOULD BE PLAYED WITHOUT SWITCHING THE BOW'S DIRECTION.

IN VOCAL PARTS, IT SHOWS MELISMAS: GROUPS OF NOTES SUNG ON A SINGLE SYLLABLE!

IN ANY SCORE, IT CAN ALSO BE USED ON LARGER GROUPS OF NOTES, WHERE IT SERVES AS A PHRASE MARKING... HELPING THE PERFORMER SEE THE OVERALL SHAPE OF THE MUSIC!

Triads

ALTHOUGH A **CHORD** IS TECHNICALLY ANY COMBINATION OF NOTES PLAYED SIMULTANEOUSLY, IN MUSIC THEORY WE USUALLY DEFINE CHORDS AS THE COMBINATION OF THREE OR MORE NOTES.

SECUNDAL HARMONY



CHORDS BUILT FROM **SECONDS** FORM **TONE CLUSTERS**, WHICH ARE NOT HARMONIC SO MUCH AS **TIMBRAL**.

TERTIAL HARMONY



CHORDS BUILT FROM **THIRDS** (MORE SPECIFICALLY, FROM **MAJOR THIRDS** AND **MINOR THIRDS**) FORM THE BASIS OF MOST HARMONY IN THE **COMMON PRACTICE PERIOD**.

QUARTAL HARMONY



CHORDS BUILT FROM **PERFECT FOURTHS** CREATE A DIFFERENT SOUND, USED IN COMPOSITIONS FROM THE **EARLY 1900S** AND ONWARD.

QUINTAL HARMONY?



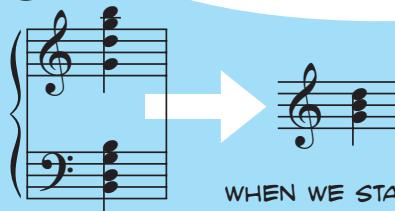
CHORDS BUILT FROM **PERFECT FIFTHS** CAN BE RESENDED AS **QUARTAL CHORDS**, AND AS SUCH THEY DO NOT CREATE A SEPARATE SYSTEM OF HARMONY.

SEXTAL HARMONY? **SEPTAL HARMONY?**
AS WITH QUINTAL HARMONY, THESE ARE THE SAME AS **TERTIAL** AND **SECUNDAL** HARMONY, RESPECTIVELY.

IS THE CHORD STILL TERTIAL IF IT IS BUILT FROM DIMINISHED THIRDS OR AUGMENTED THIRDS?

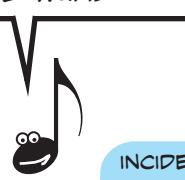
WELL, DIMINISHED THIRDS SOUND JUST LIKE MAJOR SECONDS, AND AUGMENTED THIRDS SOUND JUST LIKE PERFECT FOURTHS, SO...

NO.

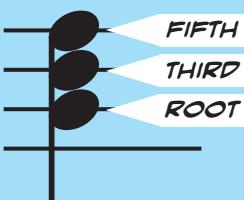


WHEN WE STACK THE CHORD IN **THIRDS** WITHIN **ONE OCTAVE**, WE GET WHAT IS CALLED THE **SIMPLE FORM** OF THE CHORD.

LET'S GET STARTED ON TERTIAL HARMONY WITH THE SMALLEST CHORD POSSIBLE: **THE TRIAD**.



THE LOWEST NOTE IN THE CHORD WHEN THE CHORD IS IN **SIMPLE FORM** IS CALLED **THE ROOT**. THE NAMES OF THE OTHER NOTES ARE BASED ON THEIR INTERVAL ABOVE THE ROOT.



A TRIAD IS DEFINED AS A **THREE-NOTE CHORD**, BUT IN PRACTICE IT IS ALMOST ALWAYS USED TO REFER TO TERTIAL THREE-NOTE CHORDS.

INCIDENTALLY, **FOUR-NOTE CHORDS** ARE TECHNICALLY CALLED **TETRADS**, BUT WE USUALLY CALL THEM **SEVENTH CHORDS**, SINCE THEY ADD A **SEVENTH**.

THERE ARE **FOUR** WAYS TO CREATE A TRIAD USING MAJOR AND MINOR THIRDS:

THE DIMINISHED TRIAD

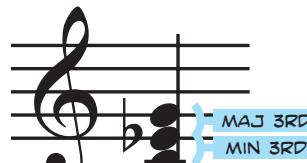
TWO MINOR THIRDS STACKED TOGETHER



C°

THE MINOR TRIAD

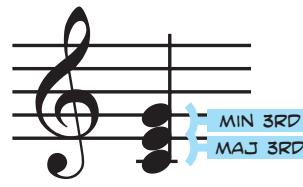
A MAJOR THIRD ON TOP A MINOR THIRD ON BOTTOM



C

THE MAJOR TRIAD

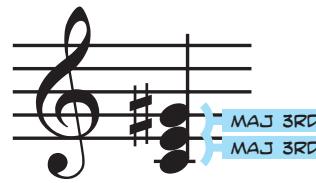
A MINOR THIRD ON TOP A MAJOR THIRD ON BOTTOM



C

THE AUGMENTED TRIAD

TWO MAJOR THIRDS STACKED TOGETHER



C+

WE LABEL TRIADS USING THEIR **ROOT** ("A C MINOR TRIAD"). THE ABBREVIATIONS SHOWN ABOVE, WHICH USE **UPPER CASE**, **LOWER CASE**, AND **SYMBOLS** TO SHOW CHORD TYPE, ARE CALLED **MACRO ANALYSIS**.

Triads in Inversion



LADIES AND GENTLEMEN, IT'S
FRANZ JOSEPH HAYDN!

AND HE'S BROUGHT A
MOVEMENT FROM HIS 1767
SONATA IN G MAJOR.

OOH! LET'S
SEE 'EM!

THANK YOU FOR HAVING ME.
IN THIS PIECE I USE QUITE A
FEW TRIADS.



HERE'S ONE: IT HAS THE NOTES
C, E AND G. IT'S A C MAJOR
TRIAD! VERY NICE.

THANK YOU. SEE HOW THE NOTES
ARE SPREAD OUT, AND NOT JUST
STACKED IN THIRDS? IT'S STILL
A TRIAD, THOUGH.

THIS ONE IS G, B, AND D...
A G MAJOR TRIAD! BUT IT SOUNDS
DIFFERENT, SOMEHOW.

THAT'S BECAUSE THE THIRD OF THE
CHORD IS IN THE BASS... WHEN THAT HAPPENS,
WE SAY THE CHORD IS IN FIRST INVERSION.

FIRST INVERSION? WHAT IS IT
CALLED WHEN THE ROOT IS IN THE
BASS, LIKE THE FIRST CHORD
WE LOOKED AT?

THAT'S CALLED
ROOT POSITION.

SO THIS ONE WITH D, F, AND A
IS A D MINOR TRIAD... IN
SECOND INVERSION!

EXACTLY! BECAUSE THE
FIFTH IS IN THE BASS.



SO THE THING THAT MAKES A
TRIAD ROOT POSITION, FIRST INVERSION
OR SECOND INVERSION IS SIMPLY
WHICH NOTE IS IN THE BASS?

IT'S HARD TO BELIEVE THAT THE
SOUND OF THE CHORD CAN CHANGE SO
MUCH JUST BECAUSE OF THE
BASS NOTE.

THAT'S RIGHT!
AND EACH ONE
HAS ITS OWN
CHARACTER.

I KNOW, RIGHT?
IT'S AWESOME.



Figured Bass



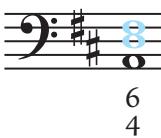
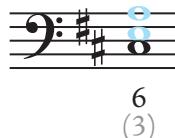
Figure 1. The Basso Continuo

THE NUMBERS AND SYMBOLS PRINTED BELOW THE BASSO CONTINUO PART ARE CALLED THE **FIGURED BASS**. SO HOW DO YOU TURN FIGURED BASS INTO CHORDS?

FIRST OF ALL, IT'S IMPORTANT TO KNOW THAT THE **NOTE** GIVEN ON THE BASS CLEF PART IS ALWAYS THE **BASS NOTE OF THE CHORD**. AND REMEMBER: THE **BASS** IS NOT NECESSARILY THE **ROOT**!

SECOND, THE NUMBERS REPRESENT INTERVALS ABOVE THE **BASS**, EVEN THOUGH SOME NUMBERS ARE USUALLY LEFT OUT.

NOTE THAT THE INTERVALS ARE ALWAYS **DIATONIC**. DON'T WORRY ABOUT **INFLECTION**... JUST USE THE NOTES FROM THE KEY SIGNATURE!



IF THERE ARE **NO NUMBERS**, ADD A **THIRD** AND A **FIFTH** ABOVE THE **BASS**... YOU GET A **ROOT POSITION TRIAD**!

A **SIX** BY ITSELF INDICATES A **SIXTH** AND A **THIRD** ABOVE THE **BASS**, WHICH CREATES A **FIRST INVERSION TRIAD**!

A **SIX** AND A **FOUR** INDICATE A **SIXTH** AND A **FOURTH** ABOVE THE **BASS**, GIVING YOU A **SECOND INVERSION TRIAD**!



#6

HERE, THE **SHARP** APPLIES TO THE **SIXTH** ABOVE THE **BASS**, SO WE ADD A **SHARP** TO THE **G**.



#

HERE, THERE IS **NO NUMBER** NEXT TO THE **SHARP**, SO WE APPLY IT TO THE **THIRD** ABOVE THE **BASS**.



6

NOTE THAT THERE IS A **NATURAL**, NOT A **FLAT**, NEXT TO THE **SIX**... IF IT WERE A **FLAT**, WE WOULD WRITE A **C FLAT**.

LASTLY, **ACCIDENTALS** ARE APPLIED TO THE INTERVAL THEY APPEAR WITH. IF YOU HAVE AN ACCIDENTAL **BY ITSELF**, IT APPLIES TO THE **THIRD** ABOVE THE **BASS**.

DON'T OVERTHINK THESE: IF THE COMPOSER WANTS A NOTE **RAISED** BY A **HALF-STEP** AND IT'S **FLATTED** IN THE KEY SIGNATURE, THE FIGURED BASS WILL HAVE A **NATURAL**, NOT A **SHARP**.

BY THE TIME THE **CLASSICAL PERIOD** GOT GOING, COMPOSERS STOPPED INCLUDING A **BASSO CONTINUO** PART, AND SO FIGURED BASS FELL OUT OF USE... WITH ONLY ONE EXCEPTION: **MUSIC THEORY CLASSES!**



REALIZING FIGURED BASS (WRITING CHORDS GIVEN A FIGURED BASS LINE) MAKES FOR AN EXCELLENT EXERCISE FOR STUDENTS TO LEARN HOW TO WRITE IN THE **COMMON PRACTICE PERIOD** STYLE!

WOOO!

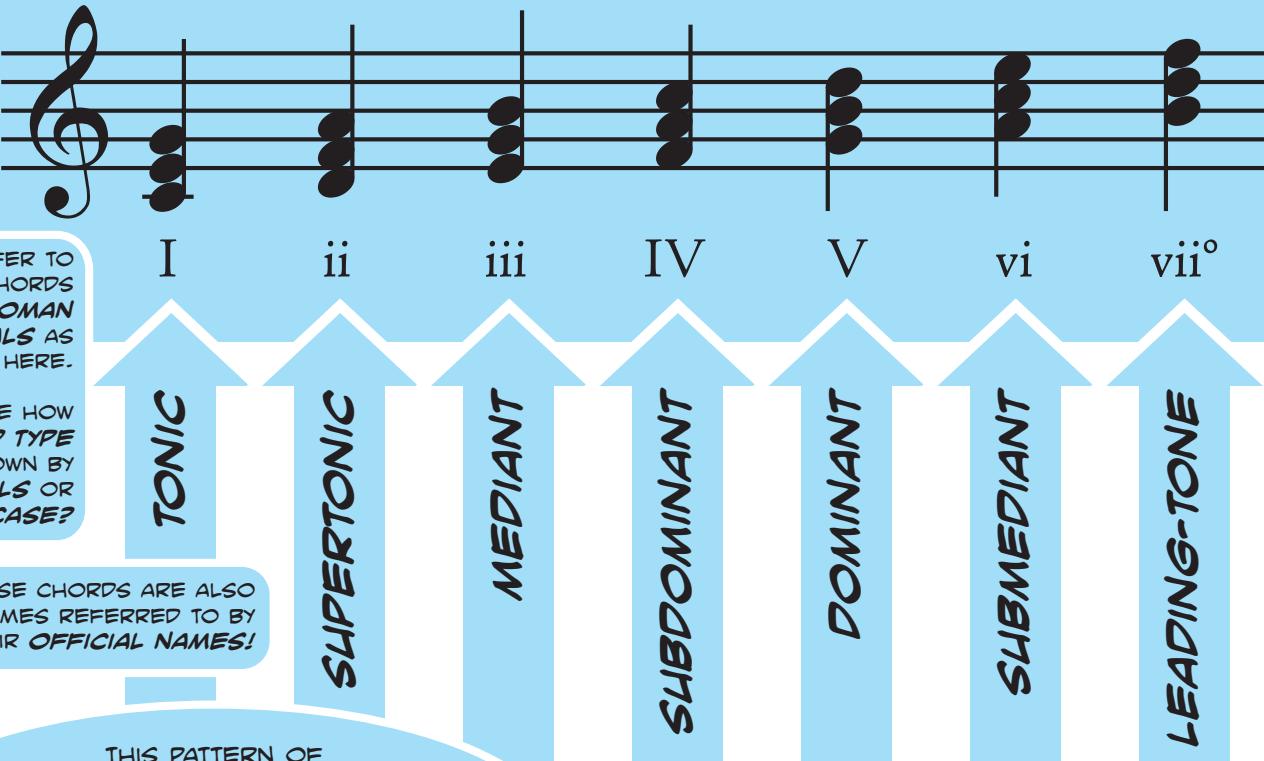
Triads Within Tonality

NOW THAT WE'RE FAMILIAR WITH HOW **TRIADS** WORK, IT'S TIME TO PUT THEM INTO THE CONTEXT OF A **KEY**.

SINCE WRITING MUSIC IN A PARTICULAR **KEY** MEANS USING THE NOTES IN THAT KEY SIGNATURE, IT STANDS TO REASON THAT MOST OF THE **CHORDS** WILL BE BUILT FROM THOSE SAME NOTES!

CHORDS WHICH USE NOTES FROM A PARTICULAR KEY SIGNATURE ARE SAID TO BE **DIATONIC** TO THAT KEY. DIATONIC MEANS "FROM THE KEY..." THAT MEANS **NO ACCIDENTALS**!

WE CAN QUICKLY SHOW ALL THE **DIATONIC TRIADS** IN A PARTICULAR KEY BY WRITING A **SCALE** IN THAT KEY AND BUILDING **TRIADS** ON EACH NOTE, USING ONLY THE NOTES IN THAT KEY.



THIS PATTERN OF MAJOR, MINOR AND DIMINISHED TRIADS IS THE **SAME** IN **EVERY MAJOR KEY**! THE **SUBDOMINANT** TRIAD IS ALWAYS MAJOR, AND THE **LEADING-TONE** TRIAD IS ALWAYS DIMINISHED, WHETHER YOU'RE IN C MAJOR OR F SHARP MAJOR!

WHY IS THE SIXTH CHORD CALLED THE **SUBMEDIAN**? WELL, JUST AS THE **MEDIANT** CHORD IS **HALFWAY** BETWEEN THE **TONIC** AND **DOMINANT** CHORDS, THE **SUBMEDIAN** CHORD IS **HALFWAY** BETWEEN THE **TONIC**... AND THE **SUBDOMINANT** A **FIFTH BELOW**!

BECAUSE THE **DOMINANT** AND **LEADING-TONE** TRIADS BOTH HAVE A STRONG TENDENCY TO RESOLVE TO **TONIC**, WE SAY THEY HAVE A "**DOMINANT FUNCTION**." THE **SUBDOMINANT** AND **SUPERTONIC** CHORDS BOTH TEND TO RESOLVE TO THE **DOMINANT**, SO WE SAY THEY BOTH HAVE A "**SUBDOMINANT FUNCTION**."

THE DIATONIC TRIADS IN MINOR WORK THE SAME WAY... SINCE WE'RE DEALING WITH **CHORDS**, WE USE THE **HARMONIC MINOR SCALE**. HOWEVER, IT'S IMPORTANT TO NOTE THAT COMMON PRACTICE PERIOD COMPOSERS RAISED THE **LEADING TONE** ONLY OVER **DOMINANT FUNCTION HARMONY**: THE **DOMINANT** AND **LEADING-TONE** TRIADS!



Introduction to Part-Writing

AS WE LOOK AHEAD, WE'RE CONFRONTED WITH AN UGLY TRUTH:

THERE IS A LOT OF MUSIC IN THE HISTORY OF THE WORLD THAT IS WORTH STUDYING...

MUCH MORE THAN WE CAN HOPE TO COVER IN THE SPAN OF A FEW SEMESTERS.

SINCE WE CAN'T COVER IT ALL, WE HAVE TO CHOOSE A **SPECIFIC MUSICAL LANGUAGE** TO STUDY IN DEPTH.

LET'S START BY NARROWING THINGS DOWN TO THE **COMMON PRACTICE PERIOD**.



 THE COMMON PRACTICE PERIOD IS THE MUSIC OF THE **BAROQUE, CLASSICAL AND ROMANTIC ERAS** IN **EUROPE AND AMERICA**. THE NAME COMES FROM THE FACT THAT MOST COMPOSERS USED A **COMMON MUSICAL LANGUAGE** DURING THIS TIME.

IT'S ESPECIALLY WORTH STUDYING BECAUSE MOST OF THE PIECES COMMONLY PERFORMED IN CONCERT ARE FROM THIS PERIOD...

BUT THERE IS A TON OF COMMON PRACTICE PERIOD MUSIC... MORE THAN WE CAN HOPE TO COVER. IS THERE A **REPRESENTATIVE STYLE** WE CAN SINK OUR ACADEMIC TEETH INTO?

...AND THE LANGUAGE FORMS THE BASIS FOR THE MOST POPULAR MUSICAL STYLES TODAY.

FOUR-VOICE CHORALE WRITING IS A GOOD STYLE TO STUDY FOR **SEVERAL REASONS**:

CHORALES HAVE A FAST **HARMONIC RHYTHM**, ALLOWING FOR A LARGER NUMBER OF CHORDS PER EXERCISE.

A LARGE PERCENTAGE OF COMMON PRACTICE PERIOD MUSIC CAN BE EASILY REDUCED TO **FOUR-VOICE COUNTERPOINT**.

THE **CANTATAS** OF **J.S. BACH** PROVIDE US WITH A TREMENDOUS AMOUNT OF CONSISTENTLY-WRITTEN **FOUR-VOICE CHORALES**.

ONE OF THE CHANGES TO THE CATHOLIC CHURCH PROPOSED BY **MARTIN LUTHER** WAS TO ALLOW MEMBERS OF THE **CONGREGATION** TO PARTICIPATE IN THE **SINGING OF THE LITURGY**.



OF COURSE, LUTHER WAS BRANDED A HERETIC FOR HIS PROPOSALS, AND BEGAN HIS OWN CHURCH IN WHICH TO IMPLEMENT HIS IDEAS.

MORE THAN TWO HUNDRED YEARS LATER, **J.S. BACH** WAS APPOINTED MUSICAL DIRECTOR AT THE **ST. THOMAS CHURCH** IN **LEIPZIG, GERMANY**, AND, IN THE SPIRIT OF LUTHER, WROTE **FIVE YEARS' WORTH** OF **LITURGICAL MUSIC**.

EACH OF THESE WORKS, CALLED **CANTATAS**, WERE BUILT AROUND A **HYMN MELODY** HARMONIZED IN **FOUR PARTS** FOR CONGREGATIONAL SINGING.



BY ANALYZING BACH'S CANTATAS, WE CAN CONSTRUCT A **SET OF "RULES"** FOR WRITING IN **FOUR-VOICE COMMON PRACTICE PERIOD** MUSICAL STYLE, ALLOWING US TO STUDY IT IN DEPTH.

Part-Writing: The Vertical Rules

TO BEST UNDERSTAND HOW COMMON PRACTICE PERIOD COMPOSERS WROTE MUSIC, WE ARE GOING TO LEARN HOW TO WRITE MUSIC USING THEIR MUSICAL STYLE.

SO THE PATTERNS WE SEE IN THEIR MUSIC, THE THINGS THEY CONSISTENTLY DID OR DIDN'T DO, ARE GOING TO BECOME "RULES" FOR US IN OUR WRITING.

IT'S WRONG TO THINK THESE WERE "RULES" FOR THE COMPOSERS... THEY WERE JUST WRITING WHAT SOUNDED GOOD TO THEM.



NOR SHOULD WE TREAT THESE AS RULES FOR WRITING MUSIC IN **GENERAL**...

EACH STYLE OF WRITING HAS ITS OWN SET OF PATTERNS, AND THIS ITS OWN "RULEBOOK." AS A COMPOSER, YOU GET TO WRITE YOUR OWN RULES FOR YOUR OWN STYLE!

SOPRANO

ALTO

TENOR

BASS

WE'RE GOING TO START WITH THE **VERTICAL RULES**... THAT IS, THE RULES THAT PERTAIN TO BUILDING A **SINGLE CHORD** IN **FOUR-VOICE HARMONY**.

FIRST, THE DISTANCE BETWEEN **SOPRANO AND ALTO** AND BETWEEN **ALTO AND TENOR** MUST BE AN OCTAVE OR LESS.

THE TENOR AND BASS CAN BE AS FAR APART AS YOU WANT!

SECOND, THE VOICES MUST BE KEPT IN THEIR **PROPER ORDER**; FOR EXAMPLE, THE **TENOR** SHOULDN'T BE **HIGHER** THAN THE **ALTO**. (BACH DID THIS NOW AND THEN, BUT IT WAS ONLY WHEN HE WANTED TO INCORPORATE SOME **SPECIAL MELODIC SHAPES**.)

THIRD, SINCE WE HAVE **FOUR VOICES** AND ONLY **THREE NOTES** IN A **TRIAD**, ONE OF THE NOTES SHOULD BE **DOUBLED**. FOR TRIADS IN **ROOT POSITION**, WE TYPICALLY DOUBLE THE **ROOT** OF THE CHORD UNLESS FORCED (BY OTHER RULES) TO DO OTHERWISE.

LASTLY, EACH VOICE SHOULD STAY IN ITS **RANGE**. THESE ARE **CONSERVATIVE RANGES** FOR **MODERN SINGERS**, BUT REMEMBER THAT BACH'S CHORALEs WERE REALLY WRITTEN FOR **AMATEURS**: THE **COMMON PEOPLE** WHO ATTENDED CHURCH IN LEIPZIG!

SOPRANO

ALTO

TENOR

BASS

Part-Writing: The Horizontal Rules

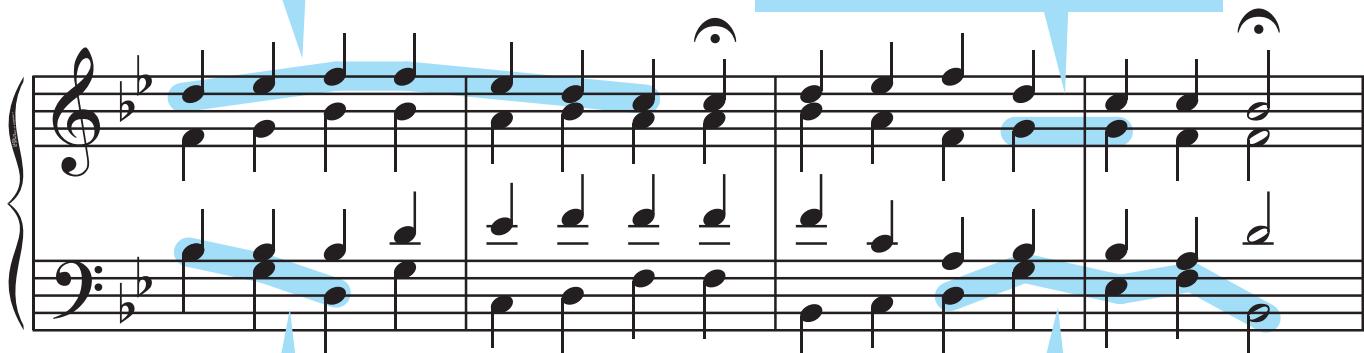


THE SUPREME GOAL OF PART-WRITING IS GOOD VOICE LEADING...
MAKING EACH INDIVIDUAL VOICE PART EASY TO SING BY AVOIDING
AWKWARD INTERVALS OR LARGE LEAPS!

BEFORE WE GET TO THE SPECIFIC DOS AND DON'TS, LET'S TAKE A LOOK
AT SOME IMPORTANT CHARACTERISTICS OF FOUR-VOICE PART-WRITING:

NOTE HOW EACH VOICE MOVES
AS LITTLE AS POSSIBLE, GOING
TO THE NEAREST CHORD TONE
IN EACH SUBSEQUENT CHORD!

IN SOME CASES, THE VOICE
CAN SIMPLY STAY ON THE SAME
NOTE. THIS IS CALLED
KEEPING THE COMMON TONE,
AND IT'S ALWAYS COOL!



IT'S COMMON FOR THE BASS TO
MOVE IN THE OPPOSITE DIRECTION
OF THE UPPER THREE VOICES.
THIS IS CALLED CONTRARY MOTION
AND IT HELPS MAINTAIN
VOICE INDEPENDENCE.

THE BASS LINE, SINCE IT PROVIDES
THE FOUNDATION OF THE HARMONY
IN EACH CHORD, TENDS TO INCLUDE
LARGER LEAPS THAN THE OTHER
THREE VOICES, BUT THAT'S OKAY.



VOICE INDEPENDENCE?

FOUR-VOICE HARMONY IS A FORM OF COUNTERPOINT,
WHICH IS THE COMBINATION OF MORE THAN ONE
MELODY PLAYED SIMULTANEOUSLY. IN COUNTERPOINT,
EACH VOICE IS EQUALLY IMPORTANT; NO VOICE IS
GIVEN A ROLE OF ACCOMPANIMENT TO ANOTHER VOICE.

IN COUNTERPOINT, IT IS IMPORTANT FOR EACH VOICE TO
BE INDEPENDENT; THAT IS, NO TWO VOICES SHOULD BE
DOING THE EXACT SAME THING. IF TWO (OR MORE)
VOICES WERE MOVING IN PARALLEL, THE RICHNESS
OF THE TEXTURE WOULD BE REDUCED.

AS A RESULT, COMMON PRACTICE COMPOSERS WERE
VERY CONSISTENT IN AVOIDING TWO OR MORE VOICES
THAT MOVED IN PARALLEL PERFECT OCTAVES, PARALLEL
PERFECT FIFTHS, OR PARALLEL PERFECT UNISONS!



PARALLEL
OCTAVES!

PARALLEL
FIFTHS!

PARALLEL
UNISONS!

THERE ARE ALSO A FEW OTHER
RULES THAT APPLY TO THIS STYLE:

WHEN YOU HAVE THE LEADING TONE
IN AN OUTER VOICE (SOPRANO OR
BASS) IT MUST RESOLVE TO THE
TONIC IN THE NEXT CHORD.

YOU MAY NOT MOVE ANY VOICE
BY AN INTERVAL OF AN
AUGMENTED SECOND
OR AN AUGMENTED FOURTH.

THE GOOD NEWS:
YOU CAN AVOID ALL THREE OF
THESE BY DOING THE FOLLOWING
WHENEVER POSSIBLE:

1. KEEP THE COMMON TONE!
2. MOVE TO THE
NEAREST CHORD TONE!
3. USE CONTRARY MOTION!

Part-Writing: Using Inversions



WHEN COMMON PRACTICE COMPOSERS USED INVERTED CHORDS IN FOUR-VOICE WRITING, THEY FOLLOWED SOME **GENERAL PATTERNS** REGARDING WHICH NOTE OF THE CHORD SHOULD BE DOUBLED.

ROOT POSITION

IN ROOT POSITION TRIADS, COMPOSERS USUALLY DOUBLED THE ROOT, WHICH IS IN THE

BASS

OF THE CHORD.



FIRST INVERSION

THE DOUBLING OF FIRST INVERSION TRIADS DEPENDS ON THE **TYPE** OF THE CHORD BEING WRITTEN.

IN MAJOR FIRST INVERSION TRIADS, COMPOSERS DOUBLED THE

SOPRANO

OF THE CHORD.

IN MINOR FIRST INVERSION TRIADS, COMPOSERS DOUBLED THE

BASS
OR
SOPRANO

OF THE CHORD.



IN DIMINISHED FIRST INVERSION TRIADS, THEY DOUBLED THE

BASS

OF THE CHORD.



SECOND INVERSION

IN SECOND INVERSION TRIADS, COMPOSERS USUALLY DOUBLED THE FIFTH, WHICH IS IN THE

BASS

OF THE CHORD.



HERE'S ANOTHER WAY TO THINK OF IT: THE **ONLY** TIME YOU CAN'T DOUBLE THE **BASS** IS IN **FIRST INVERSION MAJOR TRIADS**, WHERE YOU SHOULD DOUBLE THE **SOPRANO** INSTEAD.



OKAY, WE KNOW HOW TO USE INVERSIONS IN FOUR-PART WRITING... BUT **WHEN** CAN WE USE THEM?

THE ONLY "RULE" REGARDING ROOT POSITION TRIADS AND FIRST INVERSION TRIADS IS THAT DIMINISHED TRIADS ARE ALWAYS PLACED IN FIRST INVERSION.

THE CADENTIAL $\frac{6}{4}$ CHORD IS A TONIC TRIAD IN SECOND INVERSION FOLLOWED BY A ROOT-POSITION DOMINANT CHORD AT A CADENCE.

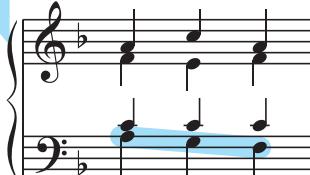


F: I $\frac{6}{4}$ V I

OTHER THAN THAT, YOU CAN USE ROOT POSITION AND FIRST INVERSION ESSENTIALLY **WHENEVER YOU WANT!**

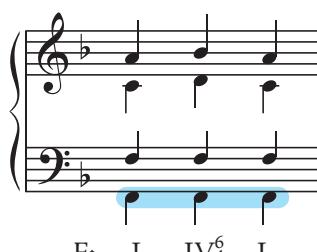
IT'S **SECOND INVERSION TRIADS** THAT HAVE THE **BIG RESTRICTIONS**.

THE PASSING $\frac{6}{4}$ CHORD IS A CHORD PLACED IN SECOND INVERSION WHERE THE BASS IS TREATED LIKE A PASSING TONE: THE MIDDLE NOTE OF A STEPWISE LINE MOVING UP OR DOWN.



F: I $\frac{6}{4}$ V $\frac{6}{4}$ I

THE PEDAL $\frac{6}{4}$ CHORD IS A SECOND INVERSION CHORD WHERE THE BASS IS TREATED LIKE A PEDAL TONE: A NOTE PRECEDED AND FOLLOWED BY THE SAME NOTE.



F: I IV $\frac{6}{4}$ I

IF YOU WRITE A SECOND INVERSION TRIAD AND IT'S NOT ONE OF THESE THREE SITUATIONS, THEN YOU ARE NOT WRITING IN THE COMMON PRACTICE PERIOD STYLE! THE COMPOSERS OF THE STYLE JUST DIDN'T USE THESE CHORDS WILLY-NILLY.



Part-Writing: Melodic Minor

SO ANYWAY, AFTER WE GOT HIM TRANPOSED BACK TO TONIC, HE BEGAN TO MODULATE AGAIN, AND...

ATTENTION! ATTENTION! WE NEED ASSISTANCE WITH A NEW PATIENT IN EMERGENCY TREATMENT ROOM 3B... STAT!

IN THE COMMON PRACTICE PERIOD, COMPOSERS USED HARMONIC MINOR BY DEFAULT. BUT WHEN AUGMENTED SECONDS OCCURRED, THEY TURNED TO A HERO FOR HELP: MELODIC MINOR!

WHAT SEEMS TO BE THE PROBLEM, SIR?

WELL, I THOUGHT I'D TRANPOSE TO MINOR, YOU KNOW, TO SURPRISE THE FAMILY... SO I DID, AND THEN I RAISED ALL MY LEADING TONES, BECAUSE I'M A COMMON PRACTICE PERIOD PROGRESSION, RIGHT?

OKAY, SURE. SO WHAT'S WRONG?

I'VE GOT AUGMENTED SECONDS!

GASP

PAGING... DR. MELODIC MINOR!

DOCTOR, WHAT CAN WE DO?

FOR THIS CASE OF ASCENDING AUGMENTED SECONDS, I PRESCRIBE A RAISED SIXTH SCALE DEGREE!

OOH... IT MAKES A MAJOR IV CHORD!

IV⁶

AND THAT MAKES A MINOR V CHORD!

AND FOR THESE DESCENDING AUGMENTED SECONDS, WE'RE GOING TO USE AN UNRAISED SEVENTH!

MY AUGMENTED SECONDS... THEY'RE CURED!

ALL IN A DAY'S WORK, MY GOOD MAN. NOW LET'S TURN TO THE UNPLEASANT MATTER OF THE BILL.

CLURE YOUR AUGMENTED SECONDS WITH MELODIC MINOR TODAY!

The Harmonic Cadences



A CADENCE IS GENERALLY CONSIDERED TO BE THE LAST TWO CHORDS OF A PHRASE, SECTION OR PIECE. THERE ARE FOUR TYPES OF CADENCES, EACH WITH THEIR OWN SPECIFIC REQUIREMENTS AND VARIATIONS.

AN AUTHENTIC CADENCE CONSISTS OF A DOMINANT FUNCTION CHORD (V OR VII) MOVING TO TONIC. TO BE CONSIDERED A PERFECT AUTHENTIC CADENCE, A CADENCE MUST MEET ALL OF THE FOLLOWING CRITERIA:

IT MUST USE A V CHORD (NOT A VII)

BOTH CHORDS MUST BE IN ROOT POSITION

THE SOPRANO MUST END ON THE TONIC

THE SOPRANO MUST MOVE BY STEP

G: V I

IF THE CADENCE DOESN'T MEET ALL OF THOSE CRITERIA, IT'S CONSIDERED TO BE AN IMPERFECT AUTHENTIC CADENCE!

G: vii^o I

G: V⁶ I

A PLAGAL CADENCE CONSISTS OF A SUBDOMINANT FUNCTION CHORD (IV OR II) MOVING TO TONIC.

TO BE CONSIDERED A PERFECT PLAGAL CADENCE,

A CADENCE MUST MEET ALL OF THE FOLLOWING CRITERIA:

IT MUST USE A IV CHORD (NOT A II)

BOTH CHORDS MUST BE IN ROOT POSITION

THE SOPRANO MUST END ON THE TONIC

THE SOPRANO MUST KEEP THE COMMON TONE

G: IV I

IF THE CADENCE DOESN'T MEET ALL OF THOSE CRITERIA, IT'S CONSIDERED TO BE AN IMPERFECT PLAGAL CADENCE!

G: IV⁶ I

G: ii I⁶

A HALF CADENCE IS ANY CADENCE THAT ENDS ON THE DOMINANT CHORD (V).

G: I V

A SPECIFIC TYPE OF HALF CADENCE IS THE PHRYGIAN CADENCE, WHICH MUST MEET THE FOLLOWING CRITERIA:
IT OCCURS ONLY IN MINOR
IT USES A IV CHORD MOVING TO V
THE SOPRANO AND BASS MOVE BY STEP IN CONTRARY MOTION
THE SOPRANO AND BASS BOTH END ON THE FIFTH SCALE DEGREE

e: iv V

e: iv V

A DECEPTIVE CADENCE IS A CADENCE WHERE THE DOMINANT CHORD (V) RESOLVES TO SOMETHING OTHER THAN TONIC... ALMOST ALWAYS THE SUBMEDIANT CHORD (VI).

G: V vi

REALLY, IT'S THE PSYCH-OUT CADENCE, IN THAT YOU EXPECT IT TO RESOLVE TO TONIC, BUT IT DOESN'T.



AND, IN FACT, IT'S MORE COMMON TO SEE THIS IN THE MIDDLE OF THE PHRASE RATHER THAN THE END... WHERE YOU MIGHT CALL IT A "CADENCE-LIKE STRUCTURE"!

Harmonic Progression

HOW DID COMPOSERS OF THE COMMON PRACTICE PERIOD DECIDE WHICH ORDER TO PUT CHORDS IN? DID THEY JUST THROW THEM DOWN ON PAPER HAPHAZARDLY?



AS A MATTER OF FACT, THERE ARE CERTAIN CHORD PROGRESSIONS THAT APPEAR **MORE FREQUENTLY**, AND THERE ARE OTHERS THAT ARE **AVOIDED** PRETTY CONSISTENTLY. WHILE THE CHOICES WERE ALWAYS BASED ON WHAT **SOUNDED GOOD** TO THE COMPOSER, THEORISTS CAN FIND A **PATTERN** IN THEIR CHOICES THAT WE CAN USE TO EASILY REMEMBER WHICH CHORD PROGRESSIONS **WORK** AND WHICH ONES **DON'T**.

ONE WAY TO UNDERSTAND THIS PATTERN IS TO THINK IN TERMS OF **ROOT MOVEMENTS**. A ROOT MOVEMENT IS THE BASIC INTERVAL BETWEEN THE ROOT OF ONE CHORD AND THE ROOT OF THE NEXT CHORD. YOU DON'T HAVE TO WORRY ABOUT THE INTERVAL'S **INFLECTION**, JUST ITS **DISTANCE** AND **DIRECTION**.

FOR EXAMPLE, TO DETERMINE THE ROOT MOVEMENT HERE, WE LOOK AT THE **ROOT** (NOT **BASS**) OF EACH CHORD AND FIGURE THE **INTERVAL** BETWEEN THEM.



A TO B IS DOWN A SEVENTH, BUT SINCE OCTAVES DON'T MATTER, WE INVERT IT TO UP A SECOND.

SO HERE'S THE PATTERN: COMMON PRACTICE PERIOD COMPOSERS GENERALLY USED ROOT MOVEMENTS OF **UP A SECOND**, **DOWN A THIRD**, AND **DOWN A FIFTH**!



THAT'S NOT SAY THAT THEY **NEVER** USED OTHER ROOT MOVEMENTS, BUT IT DIDN'T HAPPEN VERY OFTEN.

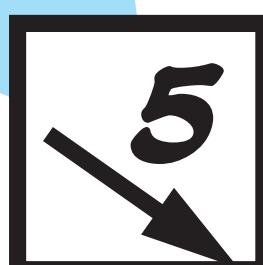
REMEMBER... SINCE **INFLECTION** DOESN'T MATTER, WE CAN IGNORE **ACCIDENTALS** WHEN WE FIGURE THE ROOT MOVEMENTS.



SEQUENCES OF CHORDS THAT **DON'T** FOLLOW THIS PATTERN ARE CALLED **RETROGRESSIONS**, AND THEY ARE CONSIDERED **UNSTYLISTIC**.



SO, FOR EXAMPLE, A **G CHORD** TO AN **E CHORD** IS DOWN A THIRD, BUT SO IS **G** TO **E FLAT**, AND **G SHARP** TO **E FLAT**!



"**UNSTYLISTIC**" IS A POLITE WAY OF SAYING "**THE COMPOSERS DIDN'T DO IT SO YOU SHOULDN'T DO IT EITHER**!"

THERE ARE ALSO FOUR SIMPLE EXCEPTIONS TO THIS PATTERN:



ANY CHORD CAN MOVE TO TONIC,



TONIC CAN MOVE TO ANY CHORD,



ANY CHORD CAN MOVE TO DOMINANT,

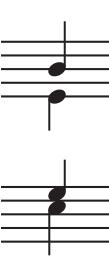


AND THE LEADING-TONE TRIAD MUST MOVE TO TONIC.



LET'S TRY IT... SAY YOU HAVE A SUPERTONIC CHORD AND YOU ARE TRYING TO DECIDE WHAT CHORD TO USE TO FOLLOW IT.

YOU CAN MOVE UP A SECOND TO A MEDIAN CHORD...



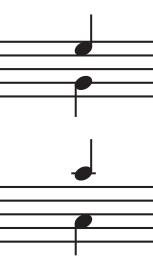
YOU CAN MOVE DOWN A THIRD TO A LEADING-TONE CHORD...



YOU CAN MOVE DOWN A FIFTH TO A DOMINANT CHORD...



OR YOU CAN USE THE FIRST EXCEPTION AND GO TO A TONIC CHORD!



Diatonic Common Chord Modulation

MODULATION IS THE PROCESS OF CHANGING TO A DIFFERENT KEY WITHIN A PIECE OF MUSIC.

THERE ARE SEVERAL DIFFERENT WAYS TO MODULATE; PERHAPS THE SIMPLEST IS THE **UNPREPARED MODULATION**, WHERE THE MUSIC PAUSES AND SUDDENLY CHANGES KEY, OFTEN UP A HALF-STEP.

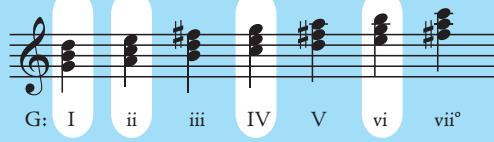


HEY... WHAT IS THIS PORTRAIT DOING HERE?

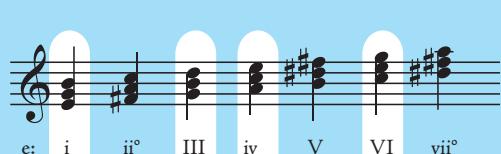
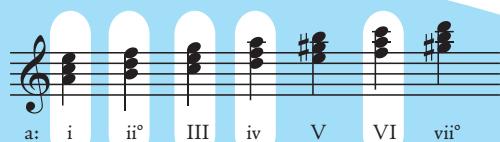
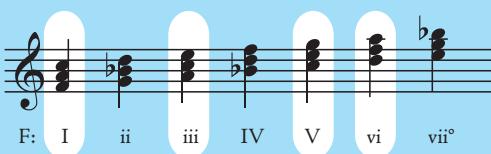
COMMON PRACTICE PERIOD COMPOSERS, HOWEVER, PREFERRED A PARTICULAR TYPE OF MODULATION THAT REQUIRED A LITTLE MORE PLANNING: THE **DIATONIC COMMON CHORD MODULATION**. AS THE NAME SUGGESTS, THIS USES A CHORD WHICH IS **DIATONIC** IN BOTH THE **OUTGOING KEY** AND THE **NEW KEY**.

LET'S SAY WE'RE STARTING OFF IN **C MAJOR**... HERE IS A LIST OF ALL THE KEYS WHICH HAVE CHORDS IN COMMON WITH C MAJOR (THE SPECIFIC CHORDS ARE HIGHLIGHTED):

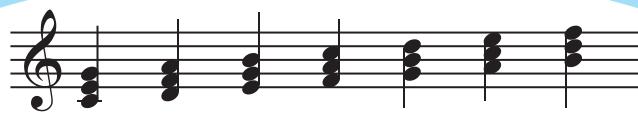
FOR INSTANCE,
THE **I CHORD**
IN **G MAJOR**
IS **G-B-D...**



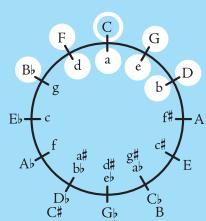
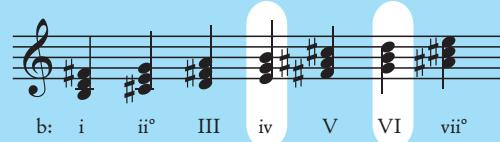
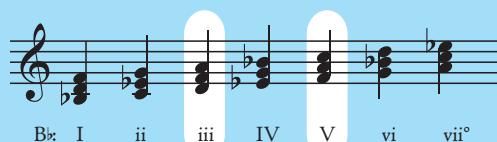
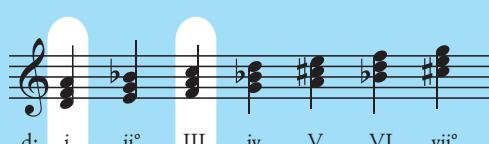
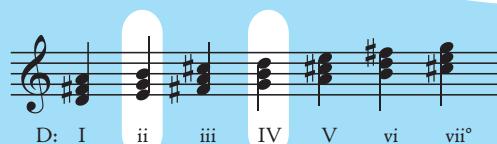
...WHICH IS
THE **V CHORD**
IN **C MAJOR!**



KEYS WHICH HAVE CHORDS IN COMMON LIKE THIS ARE CALLED **RELATED KEYS**.



NOTICE HOW THESE KEYS ARE ALL CLOSE TO ONE ANOTHER ON THE **CIRCLE OF FIFTHS**.



TO USE THIS TYPE OF MODULATION, A COMPOSER WOULD **PIVOT** THE HARMONY AROUND THE CHORD THAT FIT INTO BOTH KEYS. AS THEORISTS, WE SHOW THIS **PIVOT CHORD** BY ANALYZING THE CHORD IN **BOTH KEYS**.

NOTE THAT THE PIVOT CHORD IS **ALWAYS THE LAST CHORD** THAT CAN BE ANALYZED IN THE **OLD KEY**... THE FIRST ACCIDENTALS WILL ALWAYS OCCUR IN THE CHORD IMMEDIATELY FOLLOWING THE PIVOT CHORD!

Non-Harmonic Tones



A NON-HARMONIC TONE IS A NOTE THAT DOESN'T FIT INTO A CHORD. WE CLASSIFY NON-HARMONIC TONES BY HOW THEY ARE APPROACHED AND RESOLVED!

NAME	ABBREVIATION	APPROACH	RESOLUTION	NOTES	EXAMPLE
PASSING TONE	PT	STEP	STEP	RESOLVES BY CONTINUING IN THE SAME DIRECTION AS THE APPROACH.	
NEIGHBORING TONE	NT	STEP	STEP	RESOLVES BY RETURNING TO THE NOTE PRECEDING THE NON-HARMONIC TONE.	
APPOGGIATURA	APP	LEAP	STEP	RESOLVES IN OPPOSITE DIRECTION FROM APPROACH.	
ESCAPE TONE	ET	STEP	LEAP	RESOLVES IN OPPOSITE DIRECTION FROM APPROACH.	
CHANGING TONES	CT	ANY	STEP	TWO NON-HARMONIC TONES ON EITHER SIDE OF THE NOTE OF RESOLUTION.	
ANTICIPATION	ANT	ANY	COMMON TONE	A CHORD TONE PLAYED BEFORE THE REST OF THE CHORD ARRIVES.	
SUSPENSION	SUS	COMMON TONE	STEP	A NOTE HELD OVER FROM A PREVIOUS CHORD AND RESOLVED DOWN.	
RETARDATION	RET	COMMON TONE	STEP	A NOTE HELD OVER FROM A PREVIOUS CHORD AND RESOLVED UP.	
PEDAL TONE	PED	COMMON TONE	COMMON TONE	A CHORD TONE WHICH TEMPORARILY BECOMES A NON-HARMONIC TONE.	

SUSPENSIONS ARE TYPICALLY FURTHER IDENTIFIED BY NUMBER. THE FIRST NUMBER REPRESENTS THE INTERVAL BETWEEN THE NOTE OF SUSPENSION AND THE BASS. THE SECOND NUMBER REPRESENTS THE INTERVAL BETWEEN THE NOTE OF RESOLUTION AND THE BASS.

THE EXCEPTION TO THIS RULE IS THE 2-3 OR BASS SUSPENSION, WHERE THE NUMBERS REPRESENT THE INTERVALS BETWEEN THE BASS (WHERE THE SUSPENSION OCCURS) AND WHICHEVER VOICE HAS THE NOTE WHICH IS A SECOND (NOT COUNTING OCTAVES) ABOVE THE BASS.



4-3 SUS



7-6 SUS

2-3 (BASS) SUS



9-8 SUS

hey, it's
kids!

SPARKY THE MUSIC THEORY DOG!



Q:

Dear Sparky:

Can you elaborate on why suspensions are identified by numbers? Also, what should one watch out for when writing suspensions in four-part harmony?

--S.S., Detroit, MI

A: **WOOF!***

***TRANSLATION:** WHEN ANALYZING SUSPENSIONS, IT IS IMPORTANT TO IDENTIFY BOTH THE **NOTE OF SUSPENSION** (THE NON-HARMONIC TONE ITSELF) AND THE **NOTE OF RESOLUTION** (THE NOTE THAT COMES RIGHT AFTER THE NON-HARMONIC TONE IN THE SAME VOICE).

C: IV V⁶

THIS A IS THE
NOTE OF SUSPENSION...
IT DOESN'T BELONG IN
THIS G MAJOR TRIAD.

IT RESOLVES TO
THIS G, WHICH DOES
FIT IN THE CHORD.
IT'S THE NOTE OF
RESOLUTION!

IN ALMOST EVERY CASE,
THE SUSPENSION IS
THEN LABELED USING
TWO INTERVALS: THE
INTERVAL BETWEEN THE
NOTE OF SUSPENSION
AND THE BASS, AND THE
INTERVAL BETWEEN THE
NOTE OF RESOLUTION
AND THE BASS.

C: IV V⁶

THIS IS A 7TH!
THIS IS A 6TH!

...SO IT'S A
7-6 SUSPENSION!

WHEN WRITING AN EXAMPLE WHICH INCLUDES A SUSPENSION, IT IS VERY OFTEN USEFUL TO **BEGIN** BY WRITING THE CHORD THAT IS GOING TO CONTAIN THE SUSPENSION, **THEN** ADDING THE SUSPENSION, AND FINISHING BY WRITING THE **CHORD OF APPROACH**.

THE REAL TRICK, THOUGH, IS TO **PLAN AHEAD...** IF YOU ARE PLANNING TO WRITE A PARTICULAR TYPE OF SUSPENSION, YOU NEED TO THINK ABOUT THE **INTERVAL THAT NEEDS TO BE PRESENT** IN THE CHORD THAT INCLUDES YOUR SUSPENSION.

FOR THE 9-8 SUSPENSION,
THE SUSPENSION RESOLVES
TO AN OCTAVE ABOVE THE
BASS... THAT'S EASY, SINCE
ANY CHORD CAN INCLUDE
AN OCTAVE.

FOR THE 7-6 SUSPENSION,
THE SUSPENSION RESOLVES
TO A SIXTH ABOVE THE
BASS. THAT MEANS YOU
CAN'T USE A CHORD IN
ROOT POSITION, BECAUSE
THEY HAVE A FIFTH AND A
THIRD ABOVE THE BASS.
YOU NEED A FIRST OR
SECOND INVERSION TRIAD!

FOR THE 4-3 SUSPENSION
AND 2-3 SUSPENSION, YOU
NEED A CHORD WITH A
THIRD ABOVE THE BASS...
WHICH MEANS YOU CAN
USE ANYTHING EXCEPT A
SECOND INVERSION TRIAD.

DOING STUFF THE SPARKY WAY IS ALWAYS FUN!

Diatonic Seventh Chords



WHAT ARE THEY?

DIATONIC SEVENTH CHORDS ARE THE SEVENTH CHORDS YOU CAN CREATE USING ONLY THE NOTES IN A PARTICULAR KEY.

HERE THEY ARE IN MAJOR AND MINOR.

REMEMBER:
WE ONLY RAISE THE LEADING-TONE OVER DOMINANT-FUNCTION HARMONY!

C: I⁷ ii⁷ iii⁷ IV⁷ V⁷ vi⁷ vii⁷

a: i⁷ ii⁷ III⁷ iv⁷ V⁷ VI⁷ vii⁷

IN HARMONIC PROGRESSIONS, DIATONIC SEVENTHS CAN BE USED ANYWHERE YOU CAN USE A DIATONIC TRIAD WITH THE SAME ROOT.

V I IV vii⁰

THE 10-PART-SEVENTH-ANATOR
PAT. PENDING

1 2 3 5

IN FACT, THESE CHORDS CAN BE APPROACHED AND RESOLVED USING ANY OF THE SAME THREE ROOT MOVEMENTS AS TRIADS USE.

WITH THE DIATONIC SEVENTH CHORDS, WE ADD A FOURTH ROOT MOVEMENT: THE COMMON ROOT. HOWEVER, THIS ROOT MOVEMENT CAN ONLY BE USED TO INCREASE TENSION, SO GOING FROM A SEVENTH CHORD TO A TRIAD IS AVOIDED.

✗ V⁷ → V ✓ V → V⁷

WHEN USING THESE CHORDS IN FOUR-PART WRITING - IN FACT, WHEN YOU USE ANY SEVENTH CHORD IN FOUR-PART WRITING, YOU MUST ALWAYS, ALWAYS REMEMBER TO...

THE SEVENTH OF THE CHORD IS MOST OFTEN APPROACHED BY THE COMMON TONE.

HOWEVER, IT IS OKAY TO APPROACH THE SEVENTH FROM BELOW BY A STEP OR A LEAP, OR FROM ABOVE BY A STEP.

YOU MUST NEVER APPROACH THE SEVENTH BY A LEAP FROM ABOVE!



THERE ARE EIGHT POSSIBLE TYPES OF SEVENTH CHORDS IN TERTIAL HARMONY, BUT THE COMPOSERS OF THE COMMON PRACTICE PERIOD ONLY USED FIVE:

THE MAJOR SEVENTH
MAJOR 7TH ABOVE ROOT
MAJOR TRIAD

THE MAJOR-MINOR SEVENTH
MINOR 7TH ABOVE ROOT
MAJOR TRIAD

THE MINOR SEVENTH
MINOR 7TH ABOVE ROOT
MINOR TRIAD

THE HALF-DIMINISHED SEVENTH
MINOR 7TH ABOVE ROOT
DIMINISHED TRIAD

THE FULLY DIMINISHED SEVENTH
DIMINISHED 7TH ABOVE ROOT
DIMINISHED TRIAD

WE USE "⁰⁷" FOR HALF-DIMINISHED SEVENTHS AND "⁷" FOR FULLY DIMINISHED SEVENTHS.

SEVENTH CHORDS HAVE FOUR NOTES, SO DOUBLING IN FOUR-PART HARMONY IS NOT AN ISSUE... BUT IF YOU NEED TO USE IRREGULAR DOUBLING, DOUBLE THE ROOT AND OMIT THE FIFTH.

RESPECT THE SEVENTH!

THE SEVENTH OF THE CHORD IS ALWAYS RESOLVED DOWN BY STEP. ALWAYS!

NO, I'M SERIOUS. DON'T EVER RESOLVE THE SEVENTH OF A SEVENTH CHORD ANY OTHER WAY.

DOING SO WILL CAUSE YOU CERTAIN DEATH!



The Dominant Seventh

THE DOMINANT SEVENTH IS THE DIATONIC SEVENTH CHORD BUILT ON THE FIFTH SCALE DEGREE. WE ALREADY DISCUSSED DIATONIC SEVENTH CHORDS... WHY GIVE THIS ONE ALL THIS SPECIAL ATTENTION?

FOR ONE THING, THE DOMINANT SEVENTH IS, BY FAR, THE **MOST COMMON SEVENTH CHORD** USED BY THE COMPOSERS OF THE COMMON PRACTICE PERIOD.

BUT ANOTHER REASON FOR SPENDING A LITTLE EXTRA TIME WITH IT IS THE FACT THAT THERE ARE A FEW THINGS THAT APPLY TO IT THAT **DON'T APPLY** TO THE **OTHER DIATONIC SEVENTH CHORDS.**

FIRST, A NOTE ON TERMINOLOGY:

THE TERMS "MAJOR-MINOR SEVENTH" AND "DOMINANT SEVENTH" ARE NOT INTERCHANGEABLE! "MAJOR-MINOR SEVENTH" IS THE CHORD'S **TYPE**, AND "DOMINANT SEVENTH" IS THE **ROLE** THE CHORD PLAYS IN THE **CONTEXT OF A PARTICULAR KEY**.

IT'S JUST A MAJOR-MINOR SEVENTH...



UNTIL IT'S PLACED IN A PARTICULAR KEY!

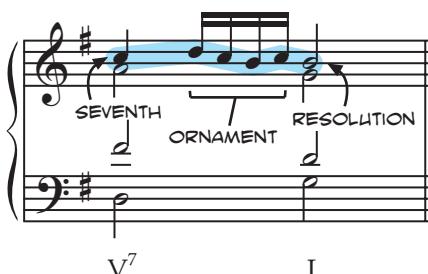


THE REASON THESE ARE OFTEN CONFUSED IS THAT IN **POPULAR AND JAZZ THEORY**, THE TERM "DOMINANT" IS USED TO LABEL THE CHORD **TYPE** INSTEAD OF THE CHORD'S **ROLE**.

THE OTHER IMPORTANT THING TO KNOW ABOUT THE DOMINANT SEVENTH CHORD IS THAT COMMON PRACTICE PERIOD COMPOSERS WOULD SOMETIMES USE SOME **NON-STANDARD** WAYS OF RESOLVING THE **SEVENTH**!

THE ORNAMENTAL RESOLUTION

IN THIS RESOLUTION, THE SEVENTH IS STILL RESOLVED **DOWN BY STEP**, BUT IT TAKES AN ORNAMENTAL "DETOUR" BEFORE GETTING THERE.

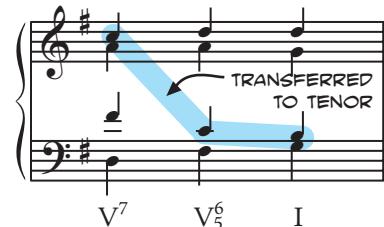


THE ORNAMENT CAN BE ANY SHAPE OR LENGTH, BUT IT **MUST** RESOLVE TO THE NOTE **DOWN A STEP** FROM THE SEVENTH OF THE SEVENTH CHORD.

THE TRANSFERRED RESOLUTION

THIS IS THE "HOT POTATO" RESOLUTION: INSTEAD OF BEING RESOLVED DOWN BY STEP IN THE SAME VOICE, THE SEVENTH IS **PASSED TO ANOTHER VOICE** IN ANOTHER DOMINANT SEVENTH CHORD.

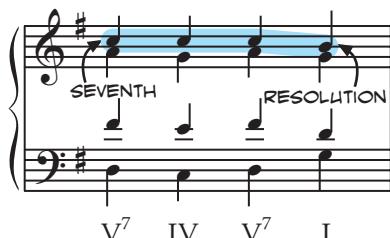
THE SEVENTH STILL NEEDS TO RESOLVE **DOWN BY STEP** BY WHATEVER VOICE IS THE LAST TO HAVE IT.



IF THE BASS VOICE GETS IT, HE **RESOLVES IT IMMEDIATELY**, ENDING THE FUN FOR EVERYONE.

THE DELAYED RESOLUTION

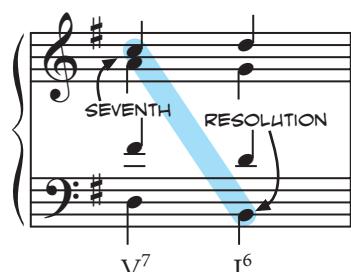
HERE, THE RESOLUTION OF THE SEVENTH IS **DELAYED** BY MOVING TO SOME OTHER CHORD (USUALLY THE **SUBDOMINANT**) AND HAVING THE SEVENTH OF THE CHORD **HOLD OUT** UNTIL THE DOMINANT SEVENTH RETURNS.



AFTER THE **V⁷** **RETURNS**, THE VOICE THAT HAS THE SEVENTH SHOULD **STILL** RESOLVE IT APPROPRIATELY!

THE BASS RESOLUTION

IN THIS RESOLUTION, THE SEVENTH OF THE CHORD IS STILL RESOLVED **DOWN BY STEP**, BUT THE NOTE IT RESOLVES TO APPEARS IN THE **BASS VOICE**.



THE VOICE THAT **HAD** THE SEVENTH RESOLVES **UP**, USUALLY BY **STEP**.

Extended Harmonies

DIMINISHED TRIAD MINOR TRIAD MAJOR TRIAD AUGMENTED TRIAD

SO FAR, WE'VE TALKED ABOUT TWO TYPES OF TERTIAL CHORDS: **TRIADS** AND **SEVENTH CHORDS**. REMEMBER, TERTIAL CHORDS ARE CHORDS CONSTRUCTED BY STACKING MAJOR AND MINOR THIRDHS!

NOW, THERE ARE **FOUR TYPES OF TRIADS** AND **EIGHT TYPES OF SEVENTH CHORDS**, EVEN THOUGH COMMON PRACTICE PERIOD COMPOSERS ONLY USED **FIVE** OF THEM.



DIMINISHED DIMINISHED SEVENTH CHORD DIMINISHED MINOR SEVENTH CHORD MINOR MINOR SEVENTH CHORD MINOR MAJOR SEVENTH CHORD
 MAJOR MINOR SEVENTH CHORD MAJOR MAJOR SEVENTH CHORD AUGMENTED MAJOR SEVENTH CHORD AUGMENTED AUGMENTED SEVENTH CHORD

SO THAT MAKES FOR **TWELVE** CHORD TYPES SO FAR... BUT WHAT IF WE KEEP GOING? WHAT OTHER CHORD TYPES CAN WE MAKE BY STACKING MAJOR AND MINOR THIRDHS? TERTIAL CHORDS WITH **FIVE**, **SIX** AND **SEVEN** NOTES ARE CALLED **NINTH CHORDS**, **ELEVENTH CHORDS** AND **THIRTEENTH CHORDS** RESPECTIVELY.

SUDDENLY THE POSSIBILITIES INCREASE FROM TWELVE...

...TO 124!

THE GOOD NEWS: COMMON PRACTICE PERIOD COMPOSERS ONLY USED THESE "EXTENDED HARMONIES" AS DIATONIC CHORDS ON THE DOMINANT.



SERIOUSLY: THESE ARE THE ONLY EXTENDED HARMONIES USED BY COMMON PRACTICE PERIOD COMPOSERS. IN FACT, THE **V¹¹** AND **V¹³** WEREN'T USED MUCH BEFORE THE ROMANTIC ERA.

NOW, WHEN WE PUT THESE CHORDS INTO **FOUR-PART HARMONY**, WE'VE GOT A PROBLEM: THEY ALL HAVE MORE THAN FOUR NOTES. SO WE HAVE TO MAKE THE TOUGH CALL: WHICH ONES DO WE CUT FROM THE TEAM?

WE NEED TO KEEP THE **ROOT** BECAUSE IT DEFINES THE CHORD. SIMILARLY, THE **THIRD** IS WHAT MAKES THE CHORD TERTIAL.

THE **SEVENTH** ACTS AS A **BRIDGE** TO THE EXTENDED HARMONY, PREVENTING THE CHORD FROM COMING ACROSS AS **TWO SEPARATE HARMONIES** PLAYED AT THE SAME TIME.

G: V⁹ G: V¹¹ G: V¹³

WHAT ABOUT A **FIFTEENTH CHORD**? TRY IT: IF YOU ADD ANOTHER THIRD ON TOP OF A THIRTEENTH, YOU ARE JUST DOUBLING THE **ROOT**. SO TERTIAL HARMONY STOPS AT 13!

FINALLY, THE **NINTH**, **ELEVENTH** OR **THIRTEENTH** OF THE CHORD IS WHAT DEFINES IT AS A NINTH, ELEVENTH OR THIRTEENTH CHORD.

SO HOW DO YOU PUT THESE IN **FOUR-PART HARMONY**? OMIT THE **FIFTH** AND USE ONLY THE **NINTH**, **ELEVENTH** OR **THIRTEENTH** AS NECESSARY.

C: V¹³

OH, AND IF YOU'RE WORRIED ABOUT INVERSIONS: **STOP**. IN THE COMMON PRACTICE PERIOD, EXTENDED HARMONIES ARE ALMOST ALWAYS FOUND IN **ROOT POSITION**.

Motivic Development

WE'RE GOING TO TAKE A LITTLE BREAK FROM THE USUAL STUFF AND... HEY, IT'S LUDWIG VAN BEETHOVEN!

WHAT'S GOING ON, MAESTRO?

ORIGINAL MOTIVE



I'LL TELL YOU WHAT'S GOING ON: I'M **GRUMPY!** I BET ARCHDUKE RUDOLPH **20 GULDEN** THAT I COULD WRITE **500 MEASURES** OF MUSIC THIS WEEK AND SO FAR I'VE ONLY COME UP WITH **FOUR STINKIN' NOTES!**

REPETITION

THE SIMPLEST FORM OF MOTIVIC DEVELOPMENT: REPEATING A PHRASE IMMEDIATELY GIVES YOU TWICE AS MUCH MUSIC!



SEQUENCE

REPEATING A MOTIVE AT A HIGHER OR LOWER LEVEL PITCH. AS WITH ALL OF THESE, THE INTERVALS DON'T HAVE TO MATCH EXACTLY.



INVERSION

FLIPPING THE MOTIVE UPSIDE-DOWN: IF THE ORIGINAL MOTIVE LEAPS DOWNWARD, AN INVERSION WILL LEAP UPWARD.



INTERVAL CONTRACTION
INTERVAL EXPANSION

MAKING THE INTERVALS WITHIN THE MOTIVE SMALLER (CONTRACTION) OR LARGER (EXPANSION).



DIMINUTION
AUGMENTATION

CHANGING THE SPEED OF THE MOTIVE SO IT IS PLAYED FASTER (DIMINUTION) OR SLOWER (AUGMENTATION).



RHYTHMIC
METAMORPHOSIS

ANY CHANGE OF THE MOTIVE'S RHYTHM (OTHER THAN JUST CHANGING THE TEMPO, AS DESCRIBED ABOVE)



IMITATION

AN "ECHO" EFFECT BETWEEN DIFFERENT VOICES (BETWEEN INSTRUMENTS IN AN ENSEMBLE, FOR EXAMPLE, OR BETWEEN REGISTERS ON THE PIANO)



SO, HEH HEH.... THAT GETS US TO 253 MEASURES...



YOU SLY FOX... 506 MEASURES!

AW, DANG! LET'S GO DOUBLE OR NOTHING!

UH, YEAH...

WAIT... WE ARE IN 4/4 TIME, RIGHT?

WOOOT! READ IT AND WEEP, RUDY!

SO LET'S USE 2/4 TIME INSTEAD!



Binary Form



WHEN WE TALK ABOUT THE **FORM** OF A PIECE, WE ARE REFERRING TO THE LARGE-SCALE LAYOUT OF THE PIECE... SPECIFICALLY, THE ARRANGEMENT OF SECTIONS OF MUSIC, HOW AND WHEN THEY ARE REPEATED, AND WHAT KEYS ARE BEING USED.

0101011101011110111001000010010000001011001011011101110100100000011

ONE OF THE SIMPLEST FORMS IS **BINARY FORM**, WHICH CONSISTS OF **TWO CONTRASTING SECTIONS**. WE REFER TO THESE TWO SECTIONS AS **A** AND **B**.

THE SECTIONS MIGHT BE CONTRASTING IN **MOOD**, **TEMPO**, **KEY**, OR EVEN IN A COMBINATION OF THESE CHARACTERISTICS.

A B

BINARY FORM

000010111001001100101001000000111001001100101011000010110110001101100011110



BAROQUE DANCE FORM

BINARY FORM IS USED IN **BAROQUE DANCE SUITES** IN A VERY SPECIFIC WAY. IN THESE PIECES, BOTH SECTIONS ARE REPEATED. THE **A** SECTION BEGINS IN THE PRIMARY KEY AND MODULATES TO THE **KEY OF THE DOMINANT**, AND THE **B** SECTION BEGINS IN THAT KEY AND MODULATES BACK TO THE **ORIGINAL KEY**. PERFORMERS OF THE TIME WOULD TYPICALLY IMPROVISE ORNAMENTATION WHEN REPEATING EACH SECTION.

0100100000110100101101100110001101110010010011001010110010001101001011000100

BAROQUE DANCE SUITES WERE WRITTEN FOR VARYING INSTRUMENTATION; MANY WERE WRITTEN FOR **KEYBOARD** (USUALLY **HARPSICHORD** OR **CLAVICHORD**), OTHERS WERE WRITTEN FOR CHAMBER GROUPS, AND SOME WERE EVEN WRITTEN FOR **FULL ORCHESTRA**.

EACH MOVEMENT OF THESE SUITES WOULD BE WRITTEN IN THE STYLE OF A PARTICULAR BAROQUE DANCE: **ALLEMANDE**, **GAVOTTE**, **BOUREE**, **COURANTE**, **SARABANDE**, **LOURE**, **GIGUE**, AND OTHERS, EACH OF WHICH HAD A SPECIFIC CHARACTER.

BECAUSE BAROQUE DANCE FORM IS SO COMMON IN BAROQUE INSTRUMENTAL MUSIC, WHEN THEORISTS AND MUSICOLOGISTS ARE TALKING ABOUT BAROQUE MUSIC AND SAY "**BINARY FORM**," THEY ARE ACTUALLY REFERRING TO **BAROQUE DANCE FORM**.

ANOTHER SOMEWHAT RARE VARIATION OF BINARY FORM IS **ROUNDED BINARY FORM**, WHERE THE **A** SECTION RETURNS AFTER THE END OF THE **B** SECTION. THIS REPRISE OF THE **A** SECTION, HOWEVER, IS **SHORTENED**, SO WE REFER TO IT AS "**A PRIME**."

A B A'

ROUNDED BINARY FORM

Ternary Form

TERNARY FORM IS A THREE-PART FORM. RATHER THAN USING THREE COMPLETELY DIFFERENT SECTIONS, MOST PIECES IN TERNARY FORM CONSIST OF TWO SECTIONS, THE FIRST OF WHICH IS REPRISED.



IN TERNARY FORM, THE **A** SECTION APPEARS BOTH AT THE BEGINNING AND AT THE END; LIKE BINARY FORM, THE **B** SECTION IS **CONTRASTING** IN CHARACTER.

THE REPRISED **A** SECTION MAY BE AN EXACT REPEAT OF THE FIRST **A**, OR IT MAY BE SLIGHTLY DIFFERENT, BUT THE LENGTH OF THE **A** SECTIONS SHOULD BE SIMILAR.

A B A

TERNARY FORM

THIS IS DIFFERENT FROM **ROUNDED BINARY**, WHERE THE REPRISED **A** SECTION (WHICH WE CALLED **A PRIME**) IS **SIGNIFICANTLY SHORTER** THAN THE FIRST **A** SECTION.



Fine



Da capo
al Fine

MINUET & TRIO FORM

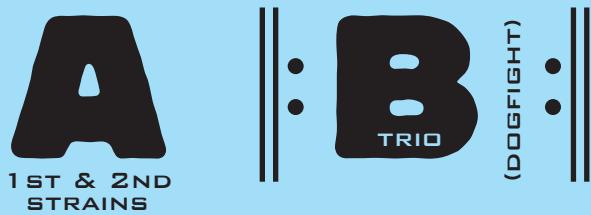
THE **MINUET AND TRIO** IS A VARIATION ON TERNARY FORM USED FOR INSTRUMENTAL MUSIC. INSTEAD OF WRITING OUT THE REPRISED **A** SECTION, THE SCORE WILL PLACE THE INSTRUCTION "**DA CAPO AL FINE**" AFTER THE **B** SECTION, WHICH MEANS TO RETURN TO THE BEGINNING, PLAY THROUGH THE **A** SECTION, AND END THE PIECE.

THIS SAME FORM IS COMMONLY USED IN BAROQUE AND CLASSICAL OPERA, WHERE IT IS CALLED **A DA CAPO ARIA**. IN BOTH MINUET & TRIO AND DA CAPO ARIA, ANY **REPEATS** ARE **IGNORED** WHEN PLAYING THROUGH THE REPRISED **A** SECTION.

IT'S WORTH MENTIONING THAT THERE IS A COMMON FORM THAT IS DESCENDED FROM **MINUET AND TRIO FORM**: **THE MILITARY MARCH FORM** FAVERED BY JOHN PHILIP SOUSA AND OTHER AMERICAN MARCH COMPOSERS.



FANFARE



I IV

MILITARY MARCH FORM

IN THE **MILITARY MARCH FORM**, THE **A** SECTION IS SPLIT INTO TWO SUBSECTIONS, CALLED THE **FIRST STRAIN** AND **SECOND STRAIN**. THE **TRIO** ADDS A FLAT (OR REMOVES A SHARP) FROM THE KEY SIGNATURE, MODULATING TO THE KEY OF THE **SUBDOMINANT**. MOST MARCHES BEGIN WITH A SHORT **FANFARE**, AND REPEAT THE **TRIO**, PLACING A SHORT, INTENSELY DRAMATIC PASSAGE BETWEEN REPETITIONS CALLED THE **DOG FIGHT** OR **BREAK STRAIN**.

Sonata Allegro Form

THE FORM ITSELF IS BASED FROM **TERNARY FORM**, IN THAT THE FIRST LARGE SECTION IS REPRISED AT THE END OF THE FORM.

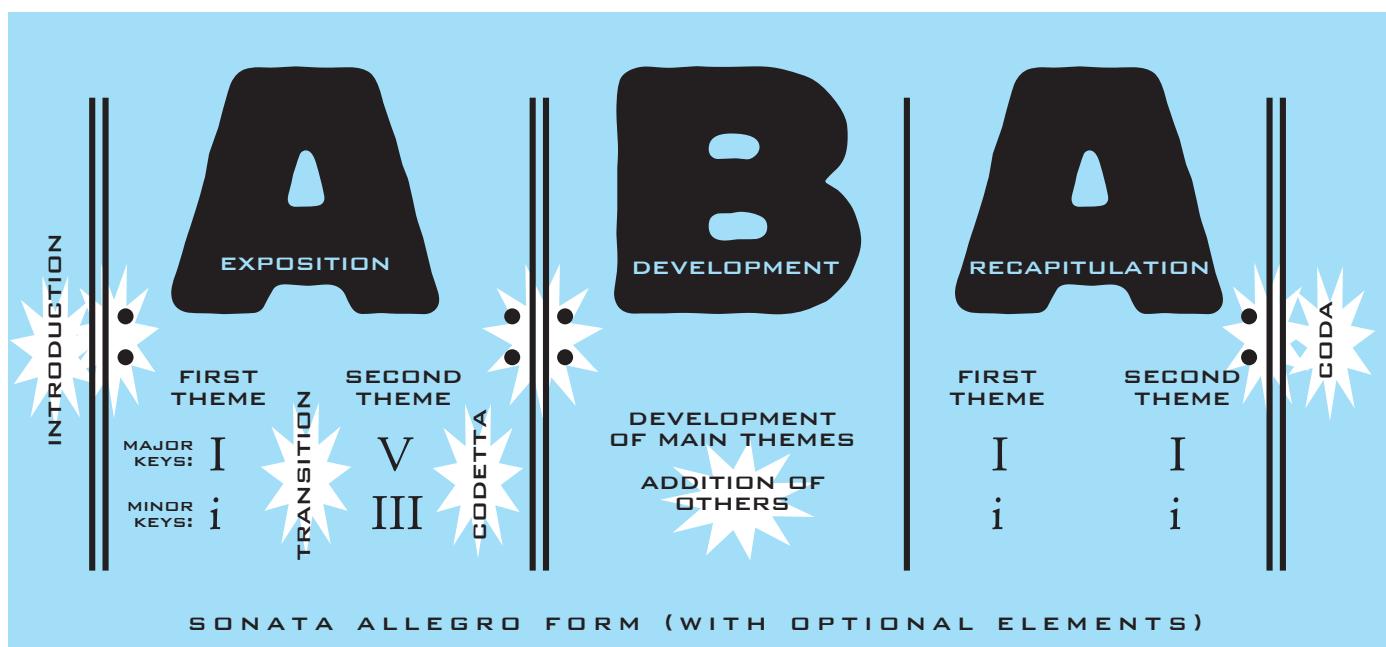
SONATA ALLEGRO FORM IS A SPECIFIC FORM FIRST USED BY **EARLY CLASSICAL** COMPOSERS IN OPENING MOVEMENTS OF MULTI-MOVEMENT WORKS FOR SOLO, CHAMBER OR LARGE GROUPS.

IT WAS EVENTUALLY ADOPTED BY OTHER COMPOSERS OF THE CLASSICAL AND EARLY ROMANTIC ERAS.



ONE OF THE MOST IMPORTANT FEATURES OF SONATA ALLEGRO FORM IS THE **TWO PRIMARY THEMES** THAT MAKE UP THE EXPOSITION. THESE TWO THEMES WILL BE **CONTRASTING IN CHARACTER** AND, AT LEAST IN THE EXPOSITION, WILL BE IN **DIFFERENT KEYS**. IN A MAJOR WORK, THE SECOND THEME WILL BE IN THE KEY OF THE **DOMINANT**; IN A MINOR PIECE, THE SECOND THEME WILL BE IN THE **RELATIVE MAJOR**. IN THE **RECAPITULATION**, HOWEVER, **BOTH THEMES ARE PLAYED IN THE TONIC!**

THE DIAGRAM ABOVE SHOWS THE **REQUIRED ELEMENTS** OF SONATA FORM; IN THE DIAGRAM BELOW, SEVERAL OTHER ELEMENTS, WHICH ARE **OPTIONALLY INCLUDED**, ARE ALSO SHOWN.



BEAR IN MIND THAT COMPOSERS DID WHAT THEY **WANTED TO...** SOME OF THE GREATEST PIECES WRITTEN IN SONATA ALLEGRO FORM FEATURE PLACES WHERE THE COMPOSER ARTFULLY **BROKE THESE "RULES"!**

Altered Chords

UP TO THIS POINT, ALL THE CHORDS WE'VE BEEN TALKING ABOUT HAVE BEEN BUILT USING ONLY THE NOTES IN THE CURRENT KEY.

ESSENTIALLY, THIS MEANS NO ACCIDENTALS, WITH THE EXCEPTION OF THE RAISED SIXTH AND SEVENTH SCALE DEGREES IN MINOR, WHICH WE CONSIDER TO BE PART OF THE KEY.

DIATONIC (CHROMATIC)

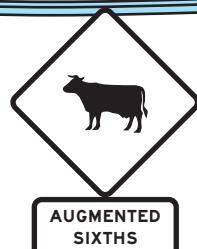


NOW THAT WE'VE COVERED ALL THE POSSIBLE DIATONIC CHORDS IN TERTIAL HARMONY, IT'S TIME TO OPEN THE DOOR TO NOTES OUTSIDE THE KEY...

THESE "ALTERED CHORDS" ADD A CERTAIN RICHNESS TO THE HARMONY BY USING ONE OR MORE NOTES THAT ARE NOT IN THE KEY SIGNATURE AND THIS REQUIRE ACCIDENTALS.

WE'LL BE COVERING SEVERAL CATEGORIES OF ALTERED CHORDS, EACH OF WHICH HAVE THEIR OWN UNIQUE RULES FOR USE.

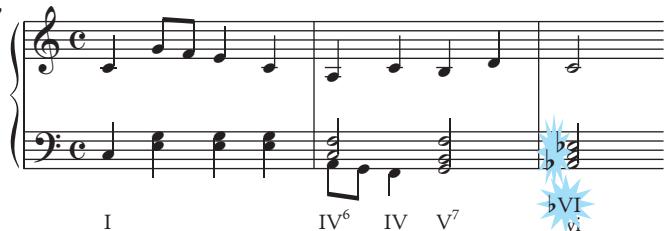
HOWEVER, THERE ARE A FEW THINGS THAT THEY ALL HAVE IN COMMON!



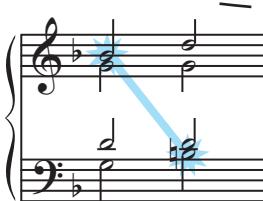
FIRST, EVERY ALTERED CHORD HAS TO HAVE AT LEAST ONE ACCIDENTAL... IF IT DOESN'T HAVE ANY ACCIDENTALS, THEN BY DEFINITION IT'S A DIATONIC CHORD!



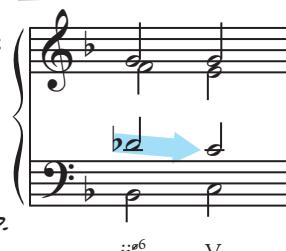
SECOND, ALTERED CHORDS CAN BE EASILY USED IN PLACE OF THEIR DIATONIC COUNTERPARTS. IN OTHER WORDS, YOU CAN ADD SOME PIZAZZ TO A COMPOSITION BY REPLACING A DIATONIC CHORD WITH AN ALTERED CHORD THAT HAS THE SAME ROOT.



IN GENERAL, AVOID CROSS RELATIONS. A CROSS RELATION OCCURS WHEN A NOTE APPEARS WITH TWO DIFFERENT ACCIDENTALS IN TWO CONSECUTIVE CHORDS, IN TWO DIFFERENT VOICES.

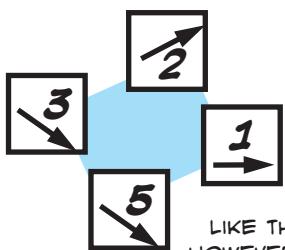


LASTLY, WHEN YOU USE THESE CHORDS IN PART-WRITING, YOU SHOULD, WHENEVER POSSIBLE, RESOLVE THE ALTERED TONES IN THE DIRECTION OF THEIR ALTERATION.



SO IF A NOTE HAS A FLAT, TRY TO RESOLVE IT DOWN BY STEP OR BY LEAP.

AND WE GENERALLY AVOID DOUBLING ALTERED NOTES, SINCE DOING SO WOULD TEND TO CAUSE PARALLEL OCTAVES.



WITH FEW EXCEPTIONS, ALTERED CHORDS CAN USE THE SAME BASIC ROOT MOVEMENTS THAT WE'VE BEEN USING.

LIKE THE DIATONIC SEVENTH, HOWEVER, THE COMMON ROOT SHOULD ONLY INCREASE TENSION... DON'T MOVE FROM AN ALTERED CHORD TO ITS DIATONIC COUNTERPART.

Borrowed Chords

ALTERED CHORDS USE NOTES OUTSIDE THE SCALE AS A MEANS OF ADDING A DIFFERENT "COLOR" TO THE CHORD.



HOW DOES A COMPOSER DECIDE WHICH ALTERED NOTES TO USE? IN A MAJOR KEY, ONE POSSIBILITY IS USING NOTES AND CHORDS FROM THE PARALLEL MINOR.

FOR EXAMPLE, THE FOLLOWING CHORDS ARE DIATONIC CHORDS IN C MINOR:

c: ii° ii^⁷ III iv VI vii^⁷

HEY, MINOR! I'LL HAVE THEM BACK BY TUESDAY THIS TIME, I PROMISE!

BUT IF WE USE THEM IN A MAJOR KEY, THEY REQUIRE ACCIDENTALS AND ARE THEREFORE ALTERED CHORDS. WE CALL THESE BORROWED CHORDS BECAUSE THEY ARE BORROWED FROM THE PARALLEL MINOR.

c: ii° ii^⁷ bIII iv bVI vii^⁷

SOME THEORISTS REFER TO THE USE OF THESE CHORDS AS MODE MIXTURE.

AND, IN FACT, THESE SIX CHORDS ARE THE SIX MOST COMMONLY USED BORROWED CHORDS IN THE COMMON PRACTICE PERIOD. (ONE OF THEM, THE MAJOR TRIAD ON THE LOWERED MEDIAN, OR "FLAT THREE," WAS NOT USED MUCH BY COMPOSERS BEFORE THE ROMANTIC ERA.)

TWO OF THESE CHORDS, THE "FLAT THREE" AND "FLAT SIX," HAVE ALTERED TONES AS ROOTS. WE PLACE A FULL-SIZED FLAT SYMBOL BEFORE THE ROMAN NUMERAL ITSELF TO INDICATE THIS ALTERED ROOT.

ALL THE USUAL PART-WRITING RULES APPLY TO THESE CHORDS. FOR EXAMPLE:

ii^⁷

THE BORROWED SUPERTONIC IS A DIMINISHED TRIAD, AND IS THEREFORE ALWAYS USED IN FIRST INVERSION.

WAIT... WHY? SINCE WE DOUBLE THE ROOT, MOVING BOTH ROOTS THE SAME DIRECTION CAN OFTEN RESULT IN PARALLEL OCTAVES.

bVI V

bVI V

IT'S MORE IMPORTANT TO AVOID PARALLELISM THAN TO RESOLVE THE NOTES A CERTAIN WAY, SO THIS USE OF CONTRARY MOTION IS BETTER.

THE BORROWED SEVENTH CHORDS CAN BE USED IN ANY INVERSION, BUT THE SEVENTH MUST BE APPROACHED AND RESOLVED PROPERLY.

ii^⁷ vii^⁷

THE PICARDY THIRD IS A MAJOR TONIC CHORD AT THE END OF A MINOR PIECE, SO MANY THEORISTS CONSIDER IT A BORROWED CHORD. REALLY, THOUGH, IT'S NOT ADDING CHROMATIC VARIETY... IT'S A LAST-MINUTE MODULATION!

bIII
bVI

IT'S USUALLY BEST TO RESOLVE ALTERED NOTES IN THE DIRECTION OF THEIR ALTERATION, BUT DOING SO IN THE TWO ALTERED ROOT CHORDS WON'T WORK.

g: i V^⁷ i VI ii^⁷ V I

THE LEADING-TONE FULLY DIMINISHED SEVENTH IS THE KING OF DOMINANT FUNCTION. DON'T EVEN THINK OF RESOLVING IT TO ANYTHING BUT TONIC!

vii^⁷

NAMED FOR 24TH-CENTURY EXPLORER JEAN-LUC PICARD!*

*NOPE.

The Neapolitan Six

IN ADDITION TO THE ALTERED ROOT BORROWED CHORDS, THERE IS ANOTHER ALTERED ROOT CHORD THAT FITS WELL WITH THE BORROWED CHORDS, EVEN THOUGH IT IS NOT ACTUALLY BORROWED FROM THE PARALLEL MINOR.

THAT CHORD IS A MAJOR TRIAD BUILT ON THE LOWERED SECOND SCALE DEGREE.

SINCE IT'S NOT A BORROWED CHORD, THIS CHORD CAN BE USED IN BOTH MAJOR AND MINOR.

THERE ARE A COUPLE OF INTERESTING THINGS ABOUT THIS CHORD. ONE IS THE FACT THAT IT IS ALMOST EXCLUSIVELY USED IN FIRST INVERSION.

SERIOUSLY! ALTHOUGH THIS CHORD IS EXTREMELY COMMON IN THE COMMON PRACTICE PERIOD, THERE ARE VERY FEW EXAMPLES OF IT USED IN ROOT POSITION. SECOND INVERSION IS EVEN RARER.

THE SECOND INTERESTING THING ABOUT THE CHORD IS ITS NAME: YOU MIGHT EXPECT IT TO BE CALLED A "FLAT TWO," IN KEEPING WITH THE OTHER ALTERED ROOT CHORDS.

THE NEAPOLITAN SIX CHORD, SINCE IT IS BUILT ON A FORM OF THE SUPERTONIC, HAS SOME CHARACTERISTICS OF A SUBDOMINANT FUNCTION CHORD

IN THAT IT OFTEN RESOLVES TOWARD A DOMINANT FUNCTION. IN FACT, IT IS VERY COMMON TO SEE THE NEAPOLITAN CHORD RESOLVE TO A DOMINANT SEVENTH IN THIRD INVERSION, OR TO A CADENTIAL SIX-FOUR CHORD.

C: $N^6 \rightarrow V_2^4$ $N^6 \rightarrow I_4^6$

(EVEN THOUGH THE NEAPOLITAN CHORD HAS A LOT IN COMMON WITH OTHER SUBDOMINANT FUNCTION CHORDS, IT IS MOST OFTEN REFERRED TO AS PART OF A LARGER GROUP OF CHORDS CALLED PREDOMINANTS, AND THE LABEL OF "SUBDOMINANT FUNCTION" IS GENERALLY LIMITED TO THE SUBDOMINANT AND SUPERTONIC CHORDS AND THEIR VARIANTS.)

BUT, IN FACT, THIS IS THE FIRST OF A FEW CHORDS THAT HAVE SPECIAL NAMES. THIS PARTICULAR ONE IS CALLED THE NEAPOLITAN CHORD.

"NEAPOLITAN" MEANS "FROM NAPLES," REFERRING TO THE CITY OF NAPLES, ITALY. THE CHORD ISN'T ACTUALLY FROM NAPLES, THOUGH; IT WAS JUST ASSOCIATED WITH THE OPERAS WRITTEN BY NEAPOLITAN COMPOSERS LIKE ALESSANDRO SCARLATTI.



NAPLES

FUNNY THING IS, THIS CHORD WAS USED PRETTY COMMONLY BEFORE SCARLATTI'S TIME, IN COMPOSITIONS FAR FROM THE COURTS OF ITALY.

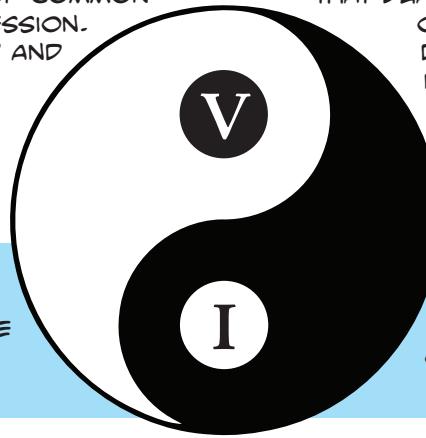
IT'S ALSO WORTH NOTING THAT ALTHOUGH NEARLY EVERY THEORIST AND THEORY TEXTBOOK CALLS THE CHORD A "NEAPOLITAN SIXTH CHORD," IT IS MORE PROPERLY CALLED A "NEAPOLITAN SIX CHORD." THAT'S BECAUSE IN THE RARE SITUATIONS WHERE IT IS USED IN ROOT POSITION, IT IS SIMPLY CALLED THE NEAPOLITAN CHORD, AND WHEN IT IS FOUND IN SECOND INVERSION, IT'S CALLED THE NEAPOLITAN SIX-FOUR.

SINCE WE DON'T PRONOUNCE I^6 AS "ONE SIXTH," WE SHOULDN'T SAY "NEAPOLITAN SIXTH" FOR N^6 !

Secondary Dominants

THERE IS A **DUALITY** AT THE HEART OF COMMON PRACTICE PERIOD HARMONIC PROGRESSION. LIKE THE ANCIENT CONFLICT OF **JEDI** AND **SITH**, IT CONSISTS OF FORCES THAT, AT ONE LEVEL, WORK **AGAINST** EACH OTHER... BUT AT ANOTHER, HIGHER LEVEL, WORK **TOGETHER**, CREATING ENERGY THAT DRIVES ALL ELSE.

THE PROGRESSION OF DOMINANT MOVING TO TONIC IS SO STRONG, IT WOULD BE NICE TO BE ABLE TO USE IT TO PROVIDE MOTION TO CHORDS **OTHER THAN TONIC**.

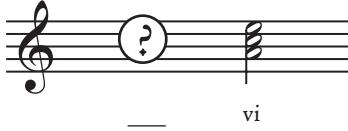


THAT DUALITY, OF COURSE, IS THE RELATIONSHIP OF **DOMINANT FUNCTION** AND **TONIC**. DOMINANT HARMONY TYPIFIES **TENSION** IN THE COMMON PRACTICE PERIOD, AND THE TONIC REPRESENTS **RELEASE**. ITS SIMPLEST FORM, THE **AUTHENTIC CADENCE**, HAS BEEN UBIQUITOUS IN WESTERN MUSIC FOR CENTURIES.

BUT THAT'S **CRAZY TALK**, THOUGH, ISN'T IT? I MEAN, HOW COULD WE **CONTROL** THAT MAGIC AND MAKE IT OBEY OUR **COMPOSITIONAL WHIM**?

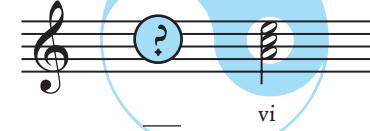
THE ANSWER, OF COURSE, IS WITH **SECONDARY DOMINANTS**.

LET'S SAY WE WANTED TO APPROACH THIS **VI** CHORD.

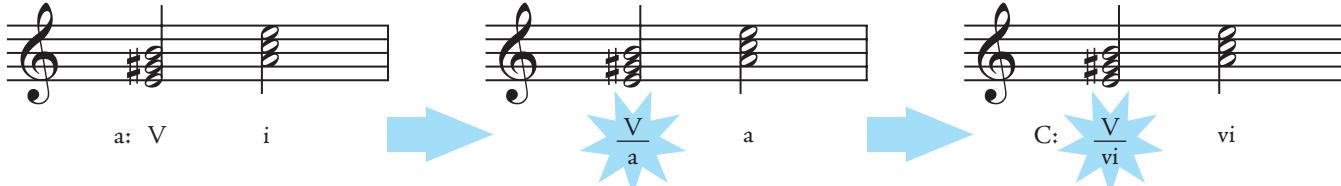


WE COULD USE ONE OF THE USUAL DIATONIC CHORDS, THE TONIC, THE SUBDOMINANT, THE MEDIANT... BUT WHAT IF WE'RE LOOKING FOR A BIT MORE **TENSION AND RELEASE**?

WHAT IF WE WANTED TO USE THAT **DOMINANT-TONIC MAGIC**?



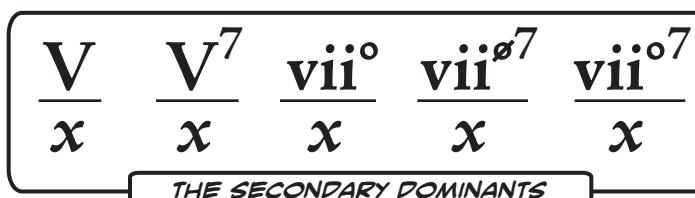
IF WE PRETEND FOR A MOMENT THAT THE CHORD WE'RE RESOLVING TO IS A **TONIC** CHORD, WHAT WOULD THE CORRESPONDING **DOMINANT** CHORD BE? **ALTERED**, YES, BUT WE'RE NOT AFRAID OF THOSE ANYMORE:



WHILE WE MIGHT HAVE ONCE CALLED THIS A **SHORT MODULATION**, IT IS REALLY MORE LIKE BORROWING ANOTHER KEY'S DOMINANT CHORD.

IF WE THINK OF THE **V** CHORD IN THE KEY AS THE **PRIMARY DOMINANT**, **V** CHORDS OF RELATED KEYS ARE **SECONDARY DOMINANTS**.

NOW, WE'RE NOT JUST LIMITED TO THE **V** CHORD: THERE ARE **FIVE** CHORDS WITH A DOMINANT FUNCTION!

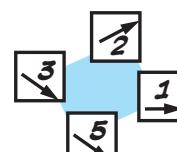


THAT GIVES US A HUGE LIST OF POSSIBILITIES!

IN **MAJOR KEYS**, THE "X" ABOVE CAN BE ANY DIATONIC CHORD OTHER THAN TONIC (OBVIOUSLY) OR THE **LEADING-TONE TRIAD**. WHY? BECAUSE A **DIMINISHED TRIAD** HAS A HARD TIME ACTING LIKE A **TEMPORARY TONIC CHORD**.

IN **MINOR KEYS**, THE COMPOSERS GENERALLY ONLY USED SECONDARY DOMINANTS OF **IV** AND OF **V**.

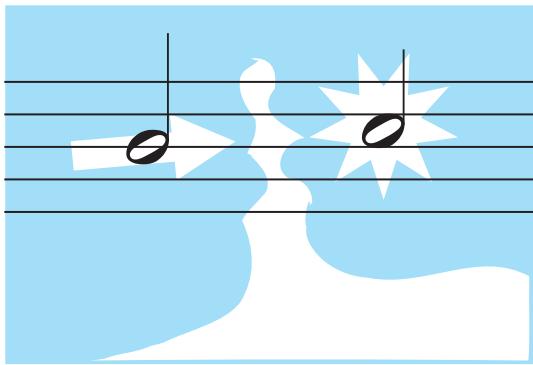
THESE CHORDS OFTEN RESOLVE TO THE CHORD "UNDER THE SLASH," BUT THEY CAN ACTUALLY BE APPROACHED AND RESOLVED USING THE **BASIC ROOT MOVEMENTS**!



YES. YES THEY DO.

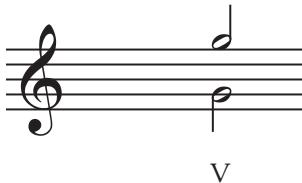
Augmented Sixth Chords

LIKE THAT MOMENT OF INCREDIBLE TENSION JUST BEFORE THE HERO FINALLY KISSES THE LEADING LADY, THE HALF-STEP IS THE GO-TO INTERVAL FOR CREATING TENSION IN MUSIC OF THE COMMON PRACTICE PERIOD. IT DRIVES THE ENTIRE STYLE!



IF ONE HALF-STEP CAN CREATE SUCH STRONG TENSION, HOW ABOUT TWO HALF-STEPS SOUNDING SIMULTANEOUSLY? LET'S GET CREATIVE HERE FOR A MINUTE TO FIND A COOL NEW WAY TO APPROACH A DIATONIC CHORD. IN THIS CASE, WE'LL USE THEM TO APPROACH THE DOMINANT TRIAD.

FIRST, WE'LL START WITH THE DOUBLED ROOT OF A V CHORD...



V

...AND APPROACH THAT OCTAVE WITH A HALF STEP BELOW THE TOP NOTE,



V

...AND A HALF STEP ABOVE THE BOTTOM NOTE...



V

...AND, FINALLY, ADD THE TONIC AS THE THIRD NOTE.

THE RESULT IS A NEW CHORD; ONE WE CALL THE AUGMENTED SIXTH CHORD, AFTER THE INTERVAL CREATED BY THE TOP AND BOTTOM NOTES.

IF WE JUST USE THREE NOTES AND DOUBLE THE TONIC, WE GET THE ITALIAN AUGMENTED SIXTH.



It.6

AUGMENTED SIXTH CHORDS ARE PREDOMINANT CHORDS, MEANING THEY ARE USED TO APPROACH DOMINANT CHORDS. THEY ARE USUALLY USED TO APPROACH DOMINANT TRIADS, NOT DOMINANT SEVENTHS, BECAUSE OF THE DOUBLED ROOTS PRESENT IN DOMINANT TRIADS.

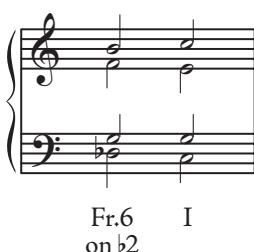
HOWEVER, THEY ALSO OFTEN APPROACH TONIC CHORDS IN SECOND INVERSION, WHICH ALSO CONTAIN A DOUBLED FIFTH SCALE DEGREE.

Ger.6 I⁶

IF WE ADD THE SECOND SCALE DEGREE INSTEAD OF DOUBLING THE TONIC, WE GET THE FRENCH AUGMENTED SIXTH.



Fr.6

Fr.6 I
on b2

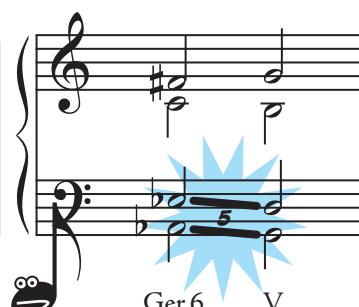
RARELY, AUGMENTED SIXTH CHORDS ARE FOUND TRANSPOSED DOWN A PERFECT FIFTH, ANALYZED AS "ON FLAT TWO," AND USED TO APPROACH A TONIC CHORD IN ROOT POSITION.

AND IF WE REPLACE THE SECOND SCALE DEGREE WITH THE LOWERED THIRD SCALE DEGREE, WE GET THE GERMAN AUGMENTED SIXTH.



Ger.6

AND, FINALLY, WHEN RESOLVING THE GERMAN AUGMENTED SIXTH CHORD TO A DOMINANT TRIAD, YOU MIGHT FIND YOURSELF WRITING PARALLEL FIFTHS... BUT IT'S PERFECTLY OKAY! MOZART DID IT ALL THE TIME!



Ger.6 V

Altered and Enharmonic Modulation

F: I IV V

C: I V I

ALTERED COMMON CHORD MODULATION IS EASY: REMEMBER DIATONIC COMMON CHORD MODULATION, WHERE WE USED A CHORD THAT WAS DIATONIC IN BOTH THE OLD AND NEW KEYS?

ALTERED COMMON CHORD MODULATION IS THE SAME THING, ONLY USING THE PIVOT CHORD AS AN ALTERED CHORD IN EITHER THE OLD KEY, THE NEW KEY, OR BOTH.

F: I IV V

E: bVI V I

NOW, IN BOTH DIATONIC MODULATION AND ALTERED MODULATION, WE HAVE ONE CHORD THAT PLAYS TWO DIFFERENT ROLES, ONE FOR EACH KEY. BUT THE CHORD TYPE DOESN'T CHANGE... IF IT WAS A MAJOR CHORD IN THE OLD KEY, IT'S STILL A MAJOR CHORD IN THE NEW KEY.

...BUT WHAT IF THE CHORD TYPE DID CHANGE?

IN ENHARMONIC MODULATION, WE RESPELL A CHORD ENHARMONICALLY SO THE CHORD TYPE ITSELF IS DIFFERENT IN THE OLD AND NEW KEYS.

THIS TECHNIQUE IS SO - WELL, ODD - THAT THERE ARE ONLY TWO SPECIFIC WAYS TO DO IT.

EVER NOTICE THAT THE GERMAN AUGMENTED SIXTH CHORD IS JUST LIKE A MAJOR-MINOR SEVENTH CHORD WITH THE SEVENTH RESPELLED ENHARMONICALLY?

C: Ger.6 D: bV⁷

BEETHOVEN DID!

WE CAN TAKE ADVANTAGE OF THIS AND USE IT AS A PIVOT CHORD... WHERE IT ACTS LIKE A GERMAN AUGMENTED SIXTH IN ONE KEY BUT LIKE A V⁷ (OR A V⁷/X SECONDARY DOMINANT) IN THE OTHER KEY!

D: bIV⁶ V⁷

C: Ger.6 V I

NOTE THAT THE PIVOT CHORD ABOVE IS APPROACHED LIKE A DOMINANT SEVENTH, BUT RESOLVED LIKE AN AUGMENTED SIXTH CHORD!

FULLY DIMINISHED SEVENTH CHORDS ARE COOL FOR A LOT OF REASONS, AND ONE OF THEM IS THAT THEY ARE EQUIDISTANT CHORDS: INVERTING A FULLY DIMINISHED SEVENTH YIELDS ANOTHER ROOT-POSITION FULLY DIMINISHED SEVENTH CHORD.

a°⁷ INVERT a°⁵ RESPELL c°⁷

MEANING THAT A FULLY DIMINISHED LEADING TONE SEVENTH CHORD CAN BE A PIVOT CHORD INTO THREE OTHER POSSIBLE KEYS:

G: I vii°⁷ WHICH CAN BE RESPelled AS E: vii°⁵ I

G: I vii°⁷ WHICH CAN BE RESPelled AS D: vii°³ I

G: I vii°⁷ WHICH CAN BE RESPelled AS B: vii°² I

Secondary Subdominants



AFTER LEARNING ABOUT **SECONDARY DOMINANTS**, YOU MIGHT WONDER IF IT'S POSSIBLE TO EXTEND THE CONCEPT TO **OTHER CHORDS**.

FOR EXAMPLE, IF WE CAN USE A **DOMINANT FUNCTION CHORD** FROM A RELATED KEY, WHAT ABOUT A **SUBDOMINANT FUNCTION CHORD** FROM A RELATED KEY, LIKE **IV OF V?**

WELL, THE ANSWER IS **YES**, AND THE CHORDS THAT RESULT ARE CALLED **SECONDARY SUBDOMINANTS**. BUT BEFORE WE TALK ABOUT THEM, YOU NEED TO **UNDERSTAND** A FEW THINGS.

FIRST OF ALL, THE VERY EXISTENCE OF THESE CHORDS IS **DEBATABLE**.

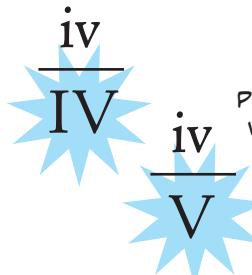
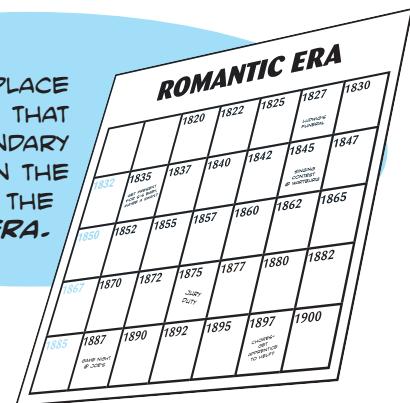
WHAT ONE THEORIST MIGHT CALL A **SECONDARY SUBDOMINANT**:

C: $\frac{\text{ii}^7}{\text{V}}$ $\frac{\text{V}^4}{\text{V}}$ V^6 I

ANOTHER MIGHT CALL A **SHORT MODULATION**.

G: $\frac{\text{ii}^7}{\text{V}^2}$ I^6
C: V^6 I

SECOND, THE ONLY PLACE WE FIND CHORDS THAT WE CAN CALL **SECONDARY SUBDOMINANTS** IS IN THE **MUSIC OF THE ROMANTIC ERA**.



LASTLY, SINCE THESE CHORDS ARE ALREADY PUSHING THE LIMITS OF TONALITY, COMPOSERS WOULD ONLY USE **SECONDARY SUBDOMINANTS** FROM **CLOSELY RELATED KEYS**. IN OTHER WORDS, **SECONDARY SUBDOMINANTS** SHOULD ONLY BE **"OF IV"** AND **"OF V."**

KEEPING THESE THINGS IN MIND, LET'S LOOK AT THE **POSSIBILITIES**: WHAT ARE ALL THE **SUBDOMINANT FUNCTION CHORDS** WE'VE ENCOUNTERED?

FIRST, THERE ARE THE **DIATONIC TRIADS**:

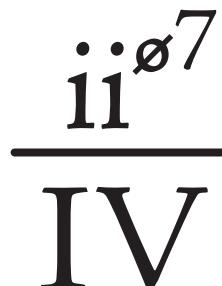
ii IV

NEXT, THE **DIATONIC SEVENTH CHORDS**:

ii^7 IV^7

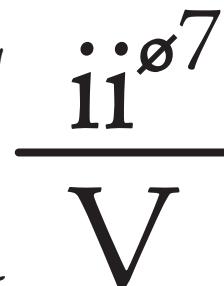
AND, LASTLY, A FEW **BORROWED CHORDS**:

ii° $\text{ii}^{\circ 7}$ iv



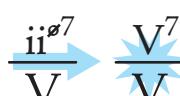
SO A **SECONDARY SUBDOMINANT** CAN HAVE ANY **SUBDOMINANT FUNCTION CHORD** **ABOVE** THE SLASH, AND A **IV** OR **V** **BELow** THE SLASH.

HOWEVER, THE MOST COMMONLY FOUND **SECONDARY SUBDOMINANTS** ARE THOSE THAT USE THE **HALF-DIMINISHED SUPERTONIC SEVENTH**.



TO APPROACH THESE CHORDS, USE ANY OF THE **BASIC ROOT MOVEMENTS**. WHICH ARE **AWESOME**.

THE MOST COMMON WAY TO **RESOLVE** **SECONDARY SUBDOMINANTS** IS TO THE CORRESPONDING **SECONDARY DOMINANT**.



Romantic Era Techniques



THE MUSIC OF THE **BAROQUE**, **CLASSICAL** AND **ROMANTIC** ERAS SHARE A CONSISTENT USE OF HARMONY AND **COUNTERPOINT**, ENOUGH TO CAUSE THEORISTS AND HISTORIANS TO GROUP THEM TOGETHER AS THE "**COMMON PRACTICE PERIOD**."

HOWEVER, THE MUSIC OF THE **ROMANTIC ERA** EMPLOYED SOME **INTERESTING TECHNIQUES** THAT SET IT APART FROM THE **BAROQUE** AND **CLASSICAL** ERAS...

- V¹¹** WE'VE ALREADY MENTIONED A FEW CHORDS THAT WERE SPECIFIC TO THE ROMANTIC ERA: **DOMINANT ELEVENTH AND THIRTEENTH CHORDS**, THE "**FLAT THREE**" BORROWED CHORD, AND **SECONDARY SUBDOMINANTS**.
- V¹³**
- bIII**

- ii^o**
- IV**
- ii^o**
- V**
- iv**
- IV**

...AND **FORESHADOW** SOME OF THE BIG CHANGES COMING IN THE **TWENTIETH CENTURY**!

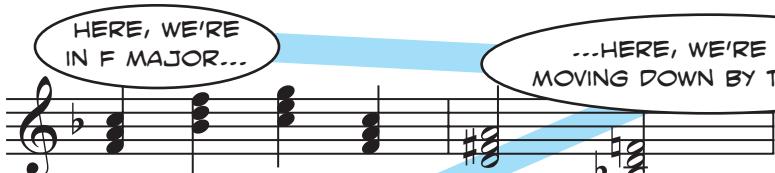


ANOTHER TECHNIQUE THAT IS UNIQUE TO THE ROMANTIC ERA IS THE RESOLUTION OF AN **AUGMENTED SIXTH CHORD** TO A **DOMINANT SEVENTH CHORD** RATHER THAN A DOMINANT TRIAD, CAUSING THE INTERVAL OF THE AUGMENTED SIXTH TO RESOLVE **OBliquely** INSTEAD OF MOVING OUTWARD TO THE OCTAVE.

FINALLY, ROMANTIC ERA COMPOSERS WOULD SOMETIMES USE A PARTICULAR TYPE OF CHORD PROGRESSION THAT HAD THE EFFECT OF **SUSPENDING TONALITY** FOR A PORTION OF THE PIECE. BY TEMPORARILY REMOVING THE FEELING OF BEING IN A CERTAIN KEY, THE COMPOSER COULD EASILY **MODULATE** TO A DISTANT KEY!

THIS TECHNIQUE IS CALLED **THIRD RELATIONS** BECAUSE IT INVOLVES MOVING BY ROOT MOVEMENTS OF A **MAJOR OR MINOR THIRD** WITHOUT RESPECT TO KEY SIGNATURE.

FOR EXAMPLE...



HERE, WE'RE IN **F MAJOR**...

...HERE, WE'RE JUST MOVING DOWN BY THIRDS...

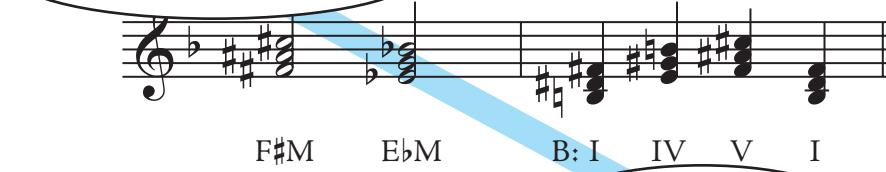
...WHICH OBSCURES ANY SENSE OF KEY WE HAD...

...WHICH OBSCURES ANY SENSE OF KEY WE HAD...

...WHICH OBSCURES ANY SENSE OF KEY WE HAD...

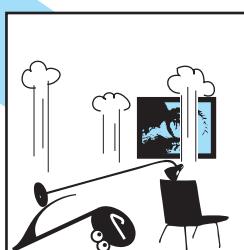
IF YOU THINK OF TONALITY LIKE BEING IN A ROOM...

...THIRD RELATIONS ARE LIKE TURNING OFF THE GRAVITY IN THE ROOM FOR A BIT...



...AND THEN TURNING THE GRAVITY BACK ON... BUT IN A DIFFERENT DIRECTION!

AND THEN WE LAND IN **B MAJOR**!



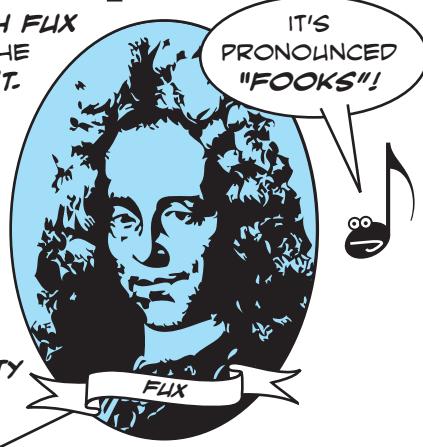
Introduction to Species Counterpoint

IN 1725, AN AUSTRIAN COMPOSER AND THEORIST NAMED JOHANN JOSEPH FLUX WROTE A THEORY TEXTBOOK CALLED *GRADUS AD PARNASSUM*, IN WHICH HE OUTLINED HIS METHOD OF TEACHING HOW TO WRITE GOOD COUNTERPOINT.

COUNTERPOINT IS THE COMBINATION OF TWO OR MORE MELODIES, EACH ONE AS IMPORTANT AND INTERESTING AS THE OTHER.

GRADUS AD PARNASSUM MEANS "STEPS TO PARNASSUS." PARNASSUS REFERRED TO THE HIGHEST PEAK IN GREECE, AND WAS USED AS A METAPHOR FOR PERFECTION.

GRADUS AD PARNASSUM WAS A **BIG HIT**, USED (OR AT LEAST PRAISED) BY COMPOSERS LIKE MOZART, BEETHOVEN, AND HAYDN. THE SYSTEM THAT FLUX USED IS REFERRED TO AS **SPECIES COUNTERPOINT**, BECAUSE IT INVOLVES GOING THROUGH INCREASING LEVELS OF RHYTHMIC COMPLEXITY WHICH ARE LABELED AS **SPECIES I**, **SPECIES II**, AND SO FORTH.



1660-1741

1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950

1525-1594



INTERESTINGLY ENOUGH, THE LANGUAGE FLUX WAS ADVOCATING WAS NOT THE COUNTERPOINT OF THE **COMMON PRACTICE PERIOD** TO WHICH HE BELONGED, BUT THE MORE **STRICT** RULES OF COUNTERPOINT USED BY COMPOSERS OF THE **RENAISSANCE** MORE THAN A **CENTURY EARLIER**.

SPECIFICALLY, FLUX WAS A **STARRY-EYED ADMIRER** OF THE ITALIAN RENAISSANCE COMPOSER **JOVANNI PIERLUIGI DA PALESTRINA**, WHO HE CONSIDERED TO REPRESENT THE **PEAK OF COMPOSITIONAL ARTISTRY**... SOMETHING HE FELT WAS BEING LOST OR EVEN SQUANDERED BY HIS **BAROQUE** AND **CLASSICAL** CONTEMPORARIES.

RIGHT. SO THE LANGUAGE FLUX IS TEACHING IS REALLY AN **INTERESTING IDEAL**: BASED PARTLY ON HIS PERCEPTIONS OF PALESTRINA'S MUSICAL LANGUAGE AS DELIVERED TO HIM THROUGH **ITALIAN THEORISTS**, AND PARTLY ON HIS OWN **IDEAS** OF WHAT HE THOUGHT THE LANGUAGE **SHOULD BE**.

BUT LET'S CUT FLUX SOME SLACK HERE: AS THEORISTS, WE'RE ALL GUILTY OF THIS TO SOME DEGREE.

ANYWAY, **LET'S GET STARTED!** GOING THROUGH FLUX'S STEPS FOR LEARNING COUNTERPOINT GIVES US A **GLIMPSE** OF HOW THE **MASTERS** LEARNED THEIR CRAFT AND A **FEEL** FOR THE **ENVIRONMENT** IN WHICH THEY DEVELOPED THEIR OWN MUSICAL LANGUAGES.

HURRAY! LET'S GO, GIOVANNI, AND BRING THE BEAUTIFUL LIGHT OF **PERFECT COMPOSITION** TO THESE EAGER STUDENTS!

YEAH, JOE, **ABOUT** THAT... YOU **DO** REALIZE THAT YOUR IDEA OF **PERFECT COMPOSITION** IS JUST A

BLISSFULLY AWESOME THING?
YES, THAT'S JUST WHAT I WAS THINKING!

NO, I MEAN THAT IT'S **SUPER FUN? YAYYYY!!!!!!**



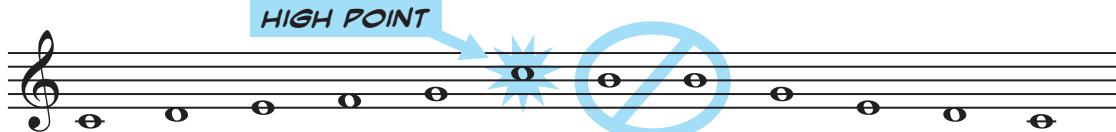
Species Counterpoint: Melody



BEFORE WE START COMBINING MELODIES, WE NEED TO UNDERSTAND WHAT CONSTITUTES A **GOOD MELODY** IN THE SYSTEM OF SPECIES COUNTERPOINT.

AND REALLY, TO BE FAIR, THESE ARE GOOD GUIDELINES FOR ANY MELODY... IT'S JUST THAT FLUX IS A LITTLE MORE STRICT ABOUT IT.

IN GENERAL, MELODIES SHOULD BE PRIMARILY **STEPWISE**, WITH A **SINGLE, DEFINITE HIGH POINT OR LOW POINT**. EFFECTIVE MELODIES TEND TO PROGRESS SLOWLY TOWARD THE HIGH OR LOW POINT AND THEN MOVE BACK TOWARD THE STARTING PITCH.



OH, AND DON'T **REPEAT NOTES** LIKE THIS. CONTRAPUNTAL MELODIES NEED TO BE **INTERESTING, NOT BORING**.

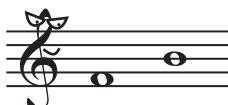


YEAH, YEAH, PALESTRINA, WE KNOW YOU REPEATED NOTES ALL THE TIME. BUT FLUX WAS PURSHING AN IDEAL. MAYBE HE FELT YOU COULD DO... BETTER?

AS YOU CAN SEE ABOVE, OCCASIONAL LEAPS ARE OKAY... BUT THEY COME WITH A **BLUNCH OF RESTRICTIONS**.

WHY, I **SHHHH**. LET'S JUST MOVE ON.

FIRST, LEAPS SHOULD BE NO LARGER THAN A **PERFECT FIFTH**, WITH TWO EXCEPTIONS: LEAPING BY A **PERFECT OCTAVE**, AND LEAPING UPWARD BY A **MINOR SIXTH**. DON'T DO THESE VERY OFTEN, THOUGH!

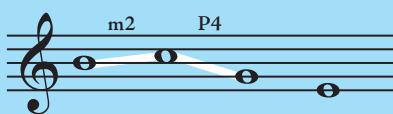


SECOND, FOR HEAVEN'S SAKE, AVOID THE **TRITONE**! THIS INTERVAL (AN **AUGMENTED FOURTH** OR **DIMINISHED FIFTH**) WAS ACTIVELY AVOIDED SO CONSISTENTLY THAT FLUX AND HIS PALS CALLED IT THE **DIABOLUS IN MUSICA**... THE "DEVIL IN MUSIC!"

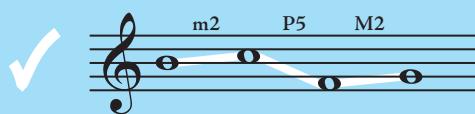
LEAPING BY A TRITONE IS BAD, BUT IT'S ALSO IMPORTANT TO AVOID THE TRITONE IN **OTHER** WAYS... FOR EXAMPLE, THIS PATTERN, WHERE A TRITONE IS **OUTLINED** IN THE MELODIC LINE, WOULD BE CONSIDERED INAPPROPRIATE.



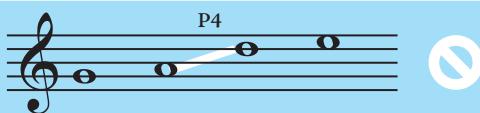
THIRD, LEAPS OF A **PERFECT FOURTH** NEED TO BE **PRECEDED OR FOLLOWED BY STEPWISE MOTION IN THE OPPOSITE DIRECTION**, TO **COUNTERBALANCE** THE LEAP. AND IF A LEAP IS **LARGER** THAN A **PERFECT FOURTH**, IT NEEDS TO BE COUNTERBALANCED **BOTH BEFORE AND AFTER**!



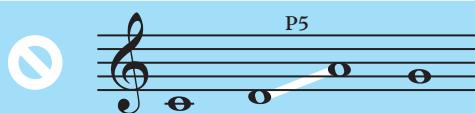
THIS **PERFECT FOURTH** IS COUNTERBALANCED BY THE STEP THAT OCCURS BEFORE THE LEAP.



THIS **PERFECT FIFTH** IS COUNTERBALANCED BY STEPS ON BOTH SIDES OF THE LEAP.



THIS **PERFECT FOURTH** IS SURROUNDED BY STEPS, BUT THEY AREN'T IN THE OPPOSITE DIRECTION.



THIS **PERFECT FIFTH** HAS STEPS ON BOTH SIDES, BUT THE FIRST ONE ISN'T IN THE OPPOSITE DIRECTION.

LASTLY, DON'T WRITE **THREE OR MORE LEAPS** IN A ROW. YOU CAN WRITE **TWO LEAPS** IN A ROW, BUT THEY NEED TO OUTLINE A **MAJOR OR MINOR TRIAD**. NO DIMINISHED TRIADS... THEY HAVE **TRITONES** IN THEM!

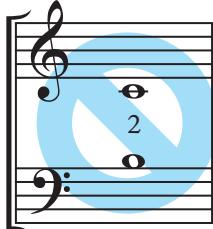
EVIL!



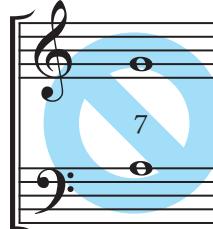
Species Counterpoint: Species I

"FIRST SPECIES" COUNTERPOINT IS THE MOST RHYTHMICALY SIMPLE TYPE OF COUNTERPOINT: BOTH VOICES HAVE THE EXACT SAME RHYTHM. AS A RESULT, IT'S ALL ABOUT THE INTERVALS!

AND THAT TAKES US TO THE **FIRST RULE**:
ONLY USE CONSONANT INTERVALS.

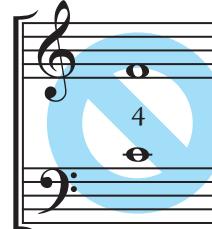


NO SECONDS!



NO SEVENTHS!

AND IT'S IMPORTANT TO KNOW THAT TO THE SIXTEENTH-CENTURY EAR, THE **PERFECT FOURTH** WAS ALSO DISSONANT!

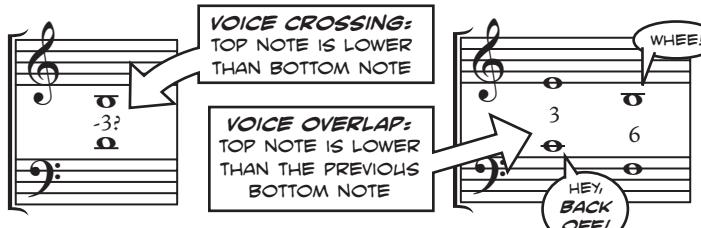


NO FOURTHS!

SEE HOW THE NUMBER OF THE INTERVAL IS WRITTEN IN BETWEEN THE TWO VOICES? YOU SHOULD DO THAT TOO.

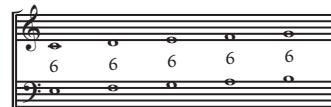
IT'S HOW ROCK STARS DO IT!

NEXT RULE: VOICES CAN'T CROSS OR OVERLAP.



AND THEN: **THIRDS AND SIXTHS** ARE FINE, BUT NO MORE THAN **THREE IN A ROW**.

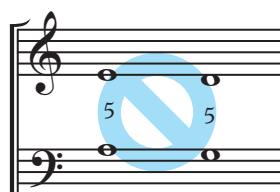
TOO MUCH CONSONANCE, AND THE NATIVES GET RESTLESS.



THE NEXT RULES HAVE TO DO WITH **PERFECT INTERVALS** (P1, P5, AND P8... REMEMBER, P4 IS DISSONANT!), WHICH PLAY **IMPORTANT ROLES** AND REQUIRE SOME **SPECIAL TREATMENT**.

BECAUSE THEY ARE SUCH A **STRONG SONORITY** WHICH CAN **STOP THE COUNTERPOINT IN ITS TRACKS**, **UNISONS** CAN ONLY BE USED ON THE **FIRST OR LAST NOTES** OF AN EXERCISE.

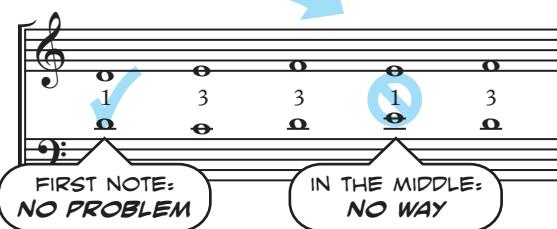
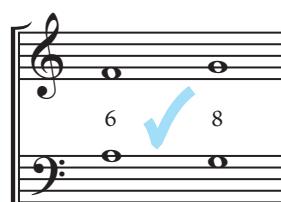
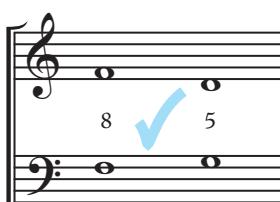
ALL PERFECT INTERVALS MUST BE APPROACHED WITH CARE IN ORDER TO PRESERVE VOICE INDEPENDENCE. FIRST OF ALL, NEVER REPEAT A **PERFECT INTERVAL**!



IN FACT, APPROACHING PERFECT INTERVALS WITH **BOTH VOICES** MOVING IN THE **SAME DIRECTION** IS BAD, EVEN IF IT'S FROM AN **IMPERFECT INTERVAL**.

PLUS, IT'S ALSO NOT OKAY TO APPROACH A PERFECT INTERVAL WITH **LEAPS** IN **BOTH VOICES**!

SO IT'S EASIEST TO REMEMBER WHAT YOU CAN DO: APPROACH PERFECT INTERVALS USING **CONTRARY MOTION**, WITH AT LEAST ONE VOICE MOVING BY STEP.



IN FACT, EACH EXERCISE MUST BEGIN AND END WITH A **PERFECT INTERVAL** WITH THE **TONIC** IN THE **LOWER VOICE**.

WAIT... WHY IS THAT LAST BIT IMPORTANT?

FOR THESE EXERCISES, YOU'LL BE WRITING A MELODY ABOVE OR BELOW AN **ALREADY-WRITTEN MELODY**, CALLED A **CANTUS FIRMUS**.

THE CANTUS FIRMUS WILL ALWAYS **START** AND **END** ON THE **TONIC NOTE**... SO IF YOU ARE WRITING COUNTERPOINT **BELLOW** THE CANTUS FIRMUS, YOU CAN'T START WITH A **PERFECT FIFTH**, BECAUSE YOU'RE LOWER VOICE WON'T BE THE **TONIC**. YOU'LL HAVE TO START WITH A **UNISON** OR **OCTAVE** INSTEAD!

Species Counterpoint: Species II

SECOND SPECIES
COUNTERPOINT ADDS A
TOUCH MORE
COMPLEXITY:
THERE ARE TWO NOTES
AGAINST EVERY ONE IN
THE CANTUS FIRMIUS.

FORTUNATELY, THAT DOESN'T MAKE IT **TWICE AS DIFFICULT**: IN FACT, MOST OF THE **PREVIOUS RULES** STILL APPLY WITHOUT ANY CHANGES.

THERE ARE ONLY A FEW EXCEPTIONS:

**SPECIES I
RULE:**

NO LEAPS
LARGER THAN
A PERFECT
FIFTH*

LEAPS ARE STILL **FINE**, BUT DON'T LEAP TO A **NEW HIGH POINT** ON A **DOWNBEAT**.

THE **A** IN THE THIRD MEASURE IS A **NEW HIGH POINT** FOR THE LINE, SO LEAPING TO IT ON THE **DOWNBEAT** PUTS A LOT OF WEIGHT ON THAT **ONE NOTE**, MAKING IT **STICK OUT OF THE TEXTURE**.

*EXCEPTING, OF COURSE, ASCENDING MINOR SIXTHS AND PERFECT OCTAVES, BUT YOU ALREADY KNEW THAT.

ONLY USE
CONSONANT
INTERVALS.

STILL TRUE... FOR **DOWNBEATS**. FOR THE **UNACCENTED** BEATS, DISSONANT INTERVALS ARE **FINE**, AS LONG AS THEY HAPPEN AS **PASSING TONES**: NOTES THAT FILL IN A **THIRD** CREATED BY SURROUNDING NOTES.

OH, AND NOTICE HOW **DISSONANT INTERVALS** HAVE THEIR **NUMBERS CIRCLED**? NICE, HUH. YOU SHOULD DO IT TOO.

UNISONS
CAN ONLY
BE USED
ON THE
FIRST AND
LAST NOTES.

UNISONS CAN BE USED ON **UNACCENTED** NOTES... JUST BE CAREFUL ABOUT **CROSSING** OR **OVERLAPPING** VOICES!

APPROACH
PERFECT
INTERVALS
USING
CONTRARY
MOTION
WITH AT LEAST
ONE VOICE
MOVING
BY STEP.

THIS RULE STILL APPLIES: IF YOU USE A **PERFECT INTERVAL** ON A **DOWNBEAT**, YOU NEED TO USE **CONTRARY MOTION** FROM THE IMMEDIATELY PRECEDING NOTES, AND AT LEAST **ONE VOICE** MUST MOVE BY **STEP**.

HOWEVER, YOU MUST ALSO BE CAREFUL NOT TO HAVE THE **SAME** **PERFECT INTERVAL** ON **TWO** **SUCCESSIVE** **DOWNBEATS**. THIS IS **PARALLEL** **PERFECT** **INTERVALS** AND IT'S GOING TO BE A **NO-NO** FOR A **GOOD LONG TIME**.

(IN FACT, IT'S ALSO NOT OKAY TO HAVE PARALLEL PERFECT INTERVALS FROM THE **UNACCENTED BEAT** TO THE **DOWNBEAT**, BUT IF YOU ARE APPROACHING WITH **CONTRARY MOTION**, THAT WOULDN'T HAPPEN ANYWAY.)

NOT TOO BAD, IS IT? YEAH! BRING ON **THIRD SPECIES!**



Species Counterpoint: Species III

THIRD SPECIES, AS YOU MIGHT HAVE GUESSED, INVOLVES FOUR NOTES AGAINST ONE.

AND, COMPARED TO THE OTHER SPECIES, IT'S **EASY PEASY!** IN FACT, THE DIFFERENCES CAN BE SUMMED UP INTO **FOUR RULES**.

FIRST: DON'T LEAP MORE THAN ONCE IN THE SAME DIRECTION.

SECOND: ALL INTERVALS LARGER THAN A THIRD, INCLUDING **PERFECT FOURTHS**, MUST BE COUNTERBALANCED BY STEPS ON BOTH SIDES.

THIRD: AS USUAL, THE **FIRST** NOTE IN EACH MEASURE MUST BE **CONSONANT**. THE **THIRD** NOTE IN THE MEASURE IS ALSO USUALLY **CONSONANT**, BUT IT **CAN BE DISSONANT**... AS LONG AS IT'S THE **ONLY DISSONANT NOTE IN THE MEASURE**.

AS FOR THE **SECOND** AND **FOURTH** NOTES, THEY CAN BE DISSONANT, AS LONG AS THEY ARE **PASSING TONES** OR **NEIGHBOR TONES**.

A **NEIGHBOR TONE** IS A NOTE APPROACHED BY **STEP**, WHICH RESOLVES **BACK** TO THE NOTE IT CAME FROM.

WAIT, DISSONANCES ON BEAT TWO? BUT I NEVER

QUIET, PALESTRINA.

FOURTH: THERE ARE TWO SPECIAL FIGURES WHICH ACT AS **EXCEPTIONS** TO THE RULES ABOVE.

HEY, THAT MAKES **FIVE** RULES! NO FAIR!

WELL, THEY'RE KIND OF SIMILAR...

THE **DOUBLE NEIGHBOR TONE** INVOLVES AN **UPPER NEIGHBOR** AND A **LOWER NEIGHBOR** PLAYED ONE AFTER ANOTHER, THEN RETURNING TO THE NOTE THAT APPROACHED IT.

THIS FIGURE CAN BE **INVERTED**, SO THE **UPPER** AND **LOWER** NEIGHBORS SWITCH PLACES.

THE **NOTA CAMBIATA** (OR **CHANGING TONE**) FOLLOWS THE PATTERN OF A **STEP DOWN**, A **THIRD DOWN**, THEN **TWO STEPS UP**. THE **MIDDLE** NOTE OF THIS **FIVE-NOTE FIGURE** MUST BE **CONSONANT**.

Species Counterpoint: Species IV

WITH THE **FOURTH SPECIES**, WE STOP USING SMALLER NOTE VALUES AND **BACK UP A BIT** TO **SPECIES I**. BUT INSTEAD OF HAVING THE NOTES MOVE AT THE **SAME TIME**, SPECIES IV INVOLVES THE VOICES BEING **OFFSET FROM ONE ANOTHER**.

THE BIGGEST DIFFERENCE WITH **SPECIES IV** IS THE FACT THAT **DISSONANCES** ARE PERMITTED ON THE **DOWNBEAT**. BUT AS YOU MIGHT EXPECT, THEY HAVE TO FOLLOW CERTAIN **SPECIFIC RULES**.

DISSONANCES IN **SPECIES IV** MUST BE IN THE FORM OF **SUSPENSIONS**. A **SUSPENSION** IS A DISSONANT NOTE THAT IS APPROACHED BY BEING HELD OVER - **SUSPENDED** - FROM THE PREVIOUS NOTE.

ANOTHER IMPORTANT DEFINING CHARACTERISTIC IS THAT THE SUSPENSION **RESOLVES DOWN** BY **STEP**. IF IT DOESN'T RESOLVE DOWN BY STEP, IT'S NOT A SUSPENSION!

WE LABEL SUSPENSIONS BY THE INTERVALS OF THE SUSPENSION AND RESOLUTION, SO THIS ONE WOULD BE CALLED A **7-6 SUSPENSION**.

IN THIS CASE, THE SUSPENSION IS THE **F** ON THE **DOWNBEAT** OF THE **SECOND MEASURE**. IT'S **PREPARED** BY THE **F** IN THE **PREVIOUS MEASURE**, AND RESOLVES DOWN TO THE **E**.

SUSPENSIONS ARE **GREAT**, BY THE WAY, BUT DON'T USE THE **SAME ONE** MORE THAN **THREE TIMES** IN A ROW, OR **FLUX** WILL **RELEASE THE HOUNDS**.

SIMILARLY, IN THIS EXAMPLE, THE SUSPENDED NOTE IS THE **D**, WHICH FORMS A **FOURTH** WITH THE **A**. IT MOVES TO A **C**, A **THIRD** ABOVE THE **BASS**, MAKING IT A **4-3 SUSPENSION**.

THE **7-6** AND **4-3** SUSPENSIONS ARE THE ONLY ONES **FLUX** ALLOWS WHEN WRITING COUNTERPOINT **ABOVE** THE CANTUS FIRMIUS.

THE ONLY SUSPENSION **FLUX** ALLOWS WHEN WRITING COUNTERPOINT **BELOW** THE CANTUS FIRMIUS IS THE **2-3 SUSPENSION**, IN WHICH THE SUSPENDED NOTE FORMS A **SECOND** WITH THE CANTUS FIRMIUS, THEN RESOLVES DOWN TO A **THIRD**. (WHEN THIS SUSPENSION IS WRITTEN AN OCTAVE LOWER, IT IS SOMETIMES CALLED A **9-10 SUSPENSION**.)

SEE HOW WE RESOLVE TO A **LARGER INTERVAL**, UNLIKE THE **7-6** OR **4-3**? WE'RE **BELOW** THE CANTUS FIRMIUS, SO WE MOVE AWAY FROM IT. BECAUSE **SUSPENSIONS ALWAYS RESOLVE DOWN**!

IN **SPECIES IV**, YOU'RE DEALING WITH A LOT OF **LIMITATIONS** WITH MELODY AND COUNTERPOINT, SO YOU WILL SOMETIMES GET **TRAPPED** IN A SITUATION WHERE **NOTHING WILL WORK**. WHEN THIS HAPPENS, YOU ARE ALLOWED TO "**BREAK SPECIES**": FORGET THE **TIE** AND SLIP INTO **SPECIES II** FOR A COUPLE OF NOTES.

FOR EXAMPLE, HERE WE **BREAK SPECIES** SO WE CAN AVOID WRITING A **FLUX-ENRAGING FOUR 4-3 SUSPENSIONS** IN A ROW!

DON'T GO **CRAZY** WITH THIS, THOUGH... **SPECIES IV** COUNTERPOINT SHOULD **EMBRACE SUSPENSIONS**, NOT **AVOID THEM**. IT'S BEST TO **BREAK SPECIES** ONLY **RARELY**. UNFORTUNATELY, SOMETIMES THAT MEANS **BACKING WAY UP** AND **CHOOSING A DIFFERENT STARTING PITCH** FOR YOUR COUNTERPOINT!

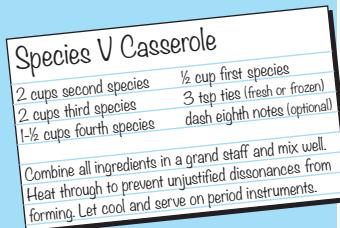
Species Counterpoint: Species V

FIFTH SPECIES COUNTERPOINT IS THE CULMINATION OF ALL THE OTHER SPECIES, AND IT'S THE CLOSEST FLUX GETS TO PALESTRINA'S STYLE OF FLORID COUNTERPOINT THAT FLUX THOUGHT WAS **SO AMAZINGLY AWESOME.**

THERE AREN'T A LOT OF NEW RULES FOR THIS SPECIES, AND THEY MAINLY DEAL WITH **COMBINING THE OTHER SPECIES.**

AND THEY'RE ALL **ABOUT RHYTHM!**

FIRST, AIM FOR A **GOOD MIX OF DIFFERENT SPECIES**. DON'T STAY TOO LONG WITH ANY PARTICULAR NOTE VALUE BEFORE SWITCHING TO **SOMETHING ELSE**, SO YOUR COUNTERPOINT REMAINS RHYTHMICAALLY INTERESTING.



WHEN YOU'RE USING A PARTICULAR NOTE VALUE, FOLLOW THE RULES OF THE **CORRESPONDING SPECIES**. SO WHEN YOU ARE USING **HALF NOTES**, MAKE SURE YOU'RE OBEYING THE RULES OF **SPECIES II**. IF YOU TIE TWO HALF NOTES TOGETHER, KEEP THE LAWS OF **FOURTH SPECIES**.

LEAVE THE **WHOLE NOTES** OUT, THOUGH, UNTIL YOU GET TO THE **END OF YOUR EXERCISE**. IF YOU **GO ALL SPECIES I** IN THE MIDDLE, THINGS GET **REAL BORING REAL FAST**.

NEXT, **SPECIES III** AND **IV** CAN BE **COMBINED** BY USING **DOTTED HALF NOTES**, WHICH ALWAYS HAVE TO START ON A **STRONG BEAT**.

ANY DISSONANCES INVOLVED WITH THIS KIND OF FIGURE HAVE TO FOLLOW THE RULES OF **FOURTH SPECIES COUNTERPOINT**: THAT IS, THEY NEED TO BE SUSPENSIONS PREPARED AND EXECUTED BY THE DOTTED HALF NOTE AND RESOLVED IMMEDIATELY AFTERWARD.

LASTLY, YOU CAN INCLUDE **EIGHTH NOTES** TO ADD MORE **RHYTHMIC INTEREST**, AS LONG AS YOU FOLLOW A FEW RESTRICTIONS:

THEY HAVE TO OCCUR IN PAIRS ON WEAK BEATS;

BOTH NOTES MUST BE APPROACHED AND RESOLVED BY STEP;

EIGHTH NOTES?
I LOVE THOSE GUYS!

ONLY ONE PAIR SHOULD BE USED IN ANY GIVEN MEASURE!

Species Counterpoint: Three Voices

LET'S HEAD BACK TO *SPECIES I*
AGAIN, BUT ADD A *THIRD VOICE!*



UH... DO WE HAVE TO?

RELAX...

IT ACTUALLY HELPS US SEE
HOW THIS ALL RELATES TO THE
FOUR-VOICE CHORALE STYLE
OF OUR MAN **BACH...**



...AND EVEN WITH ADDING A WHOLE NEW SET OF INTERVALS TO LOOK AT, IT'S REALLY NOT THAT BAD!

IN GENERAL, THE RULES FOR
MELODIES AND COUNTERPOINT
ARE THE SAME FOR SPECIES I
IN TWO VOICES.

WE STILL NEED TO USE
ONLY CONSONANT
INTERVALS BETWEEN
EACH UPPER VOICE
AND THE BASS....

BUT THE INTERVAL
BETWEEN THE UPPER
TWO VOICES CAN BE
DISSONANT... IT CAN
EVEN BE A TRITONE!

THE CHORDS CREATED SHOULD BE TRIADS.
YOU CAN FORM INCOMPLETE TRIADS
OCCASIONALLY BY HAVING A DOUBLED ROOT
AND A THIRD, BUT AVOID HAVING OPEN FIFTHS
EXCEPT ON THE FIRST OR LAST CHORD.



OOH!
BECAUSE
*SECOND-
INVERSION
TRIADS* AND
*ROOT-POSITION
DIMINISHED
TRIADS* ALL
HAVE *FOURTHS*
ABOVE THE
BASS!

TECHNICALLY, THE TRIADS MUST BE
MAJOR AND MINOR IN ROOT POSITION
AND FIRST INVERSION, AND DIMINISHED
TRIADS IN FIRST INVERSION ONLY.

BUT IF YOU FOLLOW THE RULES ABOVE
ABOUT CONSONANT AND DISSONANT
INTERVALS, IT PREVENTS YOU FROM
USING THE WRONG INVERSION!

AS WITH TWO-VOICE
COUNTERPOINT,
**PARALLEL PERFECT
INTERVALS ARE FORBIDDEN
BETWEEN ANY VOICES!**

AND **PERFECT INTERVALS**
STILL NEED TO BE
APPROACHED WITH CARE:
YOU STILL CAN'T GO WRONG
WITH **CONTRARY,**
STEPWISE MOTION!

HOWEVER, IN **THREE VOICES**,
PERFECT INTERVALS CAN ALSO
BE APPROACHED WITH **BOTH**
VOICES MOVING IN THE SAME
DIRECTION IF THE TOP VOICE
MOVES BY STEP, AND IF THE
THIRD VOICE MOVES IN
CONTRARY MOTION WITH
THE OTHERS.



AVOIDING PARALLEL PERFECT INTERVALS AND SECOND INVERSION TRIADS? KEEPING DIMINISHED TRIADS IN FIRST INVERSION? THESE ARE ALL FANTASTIC IDEAS!



USE THEM, BACH!
USE THEM
USE THEM, WING!

The Modern Modes

MODERN?
WAIT, ISN'T THIS STUFF, LIKE,
100 YEARS OLD?

YES, BUT WE ONLY CALL THEM "MODERN" BECAUSE WE NEED TO DIFFERENTIATE BETWEEN A BUNCH OF UNRELATED THINGS ACROSS MUSIC HISTORY THAT, EVER SO INCONVENIENTLY, USE THE SAME NAMES!

THE MODERN MODES' NAMES CAME FROM THE VARIOUS "KEYS" USED IN MEDIEVAL CHURCH MUSIC

WHICH WERE, IN TURN, NAMED IN HONOR OF THE LUTE RANGES USED IN LATER ANCIENT GREEK MUSIC

AND THOSE USED THE SAME NAMES AS SCALE TUNINGS DISCUSSED BY PLATO IN 380 BC!

V. WILLIAMS

HILDEGARD

ARISTOXENUS

PLATO

AND, TO MAKE MATTERS WORSE, EACH OF THESE THINGS USE THE NAMES TO REPRESENT DIFFERENT CONCEPTS! FORTUNATELY, RIGHT NOW, WE'RE ONLY WORRIED ABOUT THE MODERN MODES.

THESE MODES ARE USED A LOT...
ESPECIALLY IN FOLK MUSIC. AS FOR
STANDARD WESTERN REPERTOIRE,
THEY ARE FIRST PROMINENTLY FEATURED
IN THE POST-ROMANTIC MUSIC
OF THE EARLY TWENTIETH CENTURY
BRITISH ISLES.

SO WHAT ARE THEY?

WELL, REMEMBER WHEN WE CREATED THE NATURAL MINOR SCALE BY STARTING WITH A MAJOR SCALE, BUT USING THE SIXTH NOTE OF THE SCALE AS THE TONIC? IT GAVE US A NEW PATTERN OF WHOLE STEPS AND HALF STEPS... A NEW SCALE.

KEEPING THE SAME KEY SIGNATURE,
WE USE THIS NOTE AS OUR NEW TONIC!



IN FACT, THESE ARE TWO OF THE SEVEN MODERN MODES:
MAJOR IS THE IONIAN MODE, AND NATURAL MINOR IS THE AEOLIAN MODE.

BY STARTING ON THE OTHER NOTES OF THE MAJOR SCALE, WE GET THE OTHER FIVE MODES.

BECAUSE IT HAS
A DIMINISHED TONIC,
LOCRIAN IS A THEORETICAL
MODE... IT'S NOT USED
IN ACTUAL PRACTICE.

B TO B: THE LOCRIAN MODE

G TO G: THE MIXOLYDIAN MODE

F TO F: THE LYDIAN MODE

E TO E: THE PHRYGIAN MODE

D TO D: THE DORIAN MODE

THE MODES HERE ALL SHARE
THE SAME KEY SIGNATURE...
THEY ARE RELATED, LIKE
C MAJOR AND A MINOR!



A MORE EFFECTIVE
METHOD OF KEEPING
THE MODES STRAIGHT
INVOLVES MEMORIZING
EACH MODE'S
COLOR TONE:
THE SCALE DEGREE
THAT MAKES IT
UNIQUE FROM THE
MAJOR OR MINOR
SCALE WITH THE
SAME TONIC.

